
DIODE, RECTIFIER, ZENER DIODE DESIGN KIT

P/N: DIODEK-45

45 popular values, both SMD and Through hole type.

Total: 225pcs

1	1N4001	Rectifier 1A 50V DO-41
2	1N4004	Rectifier 1A 400V DO-41
3	1N4007	Rectifier 1A 1000V DO-41
4	1N5401	Rectifier 3A 100V DO-27
5	1N5404	Rectifier 3A 400V DO-27
6	1N5408	Rectifier 3A 1000V DO-27
7	1N5817	Schottky Diode 1A 20V DO-41
8	1N5819	Schottky Diode 1A 40V DO-41
9	1N5822	Schottky Diode 3A 40V DO-27
10	1N4148	Switching Diode 300mA 100V DO-35
11	S1G	Rectifier 1A 400V SMA
12	S1M	Rectifier 1A 1000V SMA
13	RS1M	Fast Recovery Rectifier 1A 1000V SMA 500nS
14	SS14	Schottky Diode 1A 40V SMA
15	SS24B	Schottky Diode 2A 40V SMB
16	LL4148	Schottky Diode 300mA 100V DO-35
17~45	1N47xx	Zener Diode, 1W, 3.3V~47V, DO-41G

AUGUST 14, 2022

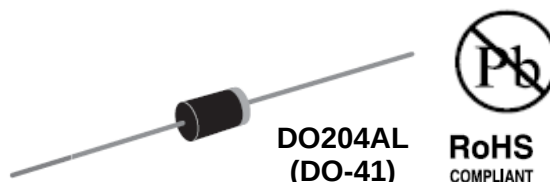
44611 S. Grimmer Blvd., Fremont, CA 94538 USA
510-241-9686

General Purpose Silicon Rectifier

1N4001~1N4007

Features

- Low forward voltage drop
- Low leakage current
- High forward surge current capability
- High temperature soldering guaranteed 260°C/10 seconds
/.0375" (9.5mm) lead length
- RoHS and REACH Compliant



Mechanical Data

Case:	DO-41, transfer molded plastic
Epoxy:	Meets UL 94V-0 flammability rating
Terminals:	Plated axial leads, solderable per MIL-STD-202E, Method 208C
Polarity:	Cathode indicated by color band
Mounting position:	Any
Weight:	0.012 Ounce, 0.33 gram

Maximum Ratings ($T_{Ambient}=25^{\circ}\text{C}$ unless noted otherwise)

Symbol	Description	1N4001	1N4002	1N4003	1N4004	1N4005	1N4006	1N4007	Unit	Conditions
VRRM	Max Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V	
VRMS	Max RMS Voltage	35	70	140	280	420	560	700	V	
VDC	Max DC Blocking Voltage	50	100	200	400	600	800	1000	V	
IF(AV)	Max Average Forward Rectified Current	1.0							A	.0375" (9.5mm) lead length at $T_A=75^{\circ}\text{C}$
IFSM	Peak Forward Surge Current	30							A	8.3ms single half sine-wave (JEDEC)
IR(AV)	Max Full Load Reverse Current	30							μA	Full cycle average .0375" (9.5mm) lead length
TJ, TSTG	Operating and Storage Temperature Range	-50 to +150							$^{\circ}\text{C}$	

Electrical Characteristics ($T_{Ambient}=25^{\circ}\text{C}$ unless noted otherwise)

Symbol	Description	1N4001	1N4002	1N4003	1N4004	1N4005	1N4006	1N4007	Unit	Conditions
VF	Max Instantaneous Forward Voltage	1.1							V	IF(AV)=1.0A
IR	Max DC Reverse Current at Rated DC Blocking Voltage	5.0							μA	TA=25°C
		50								TA=100°C
CJ	Typical Junction Capacitance	15							pF	At 1MHz, reversed voltage of 4V
Rθ-JA	Typical Thermal Resistance	50							°C/W	Note 2

Note:

1. Single phase, half wave, 60Hz, resistive or inductive load. Derate current by 20% for capacitive load
2. Thermal resistance from junction to ambient at .375" (9.5mm) lead length, PCB mounted with copper pad area of 0.2" x 0.2" (5x5mm).

3. Typical Characteristics Curves

1N4001~1N4007

Fig.1- Forward Current Derating Curve

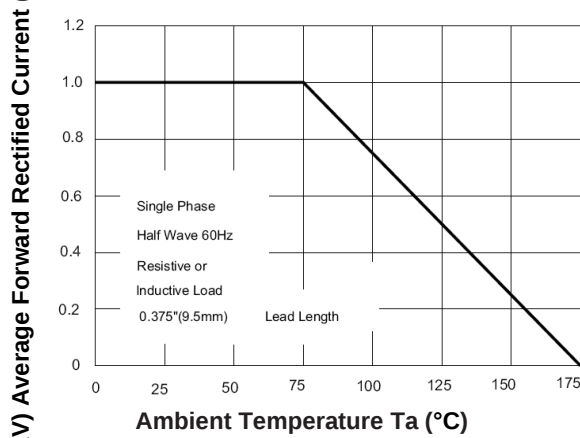


Fig.2- Max. Non-Repetitive Forward Surge Current

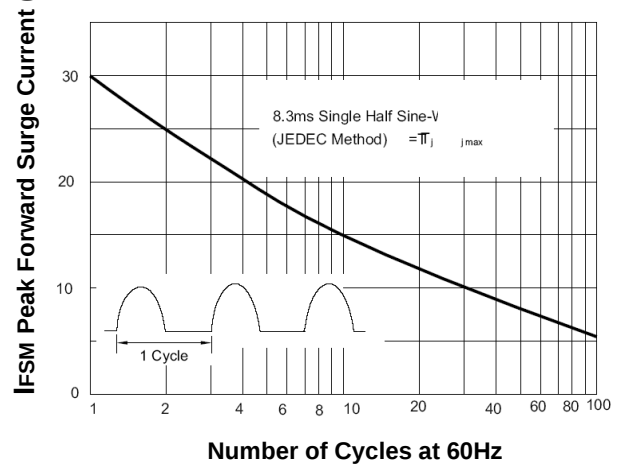


Fig.3- Typical Instantaneous Forward Characteristics

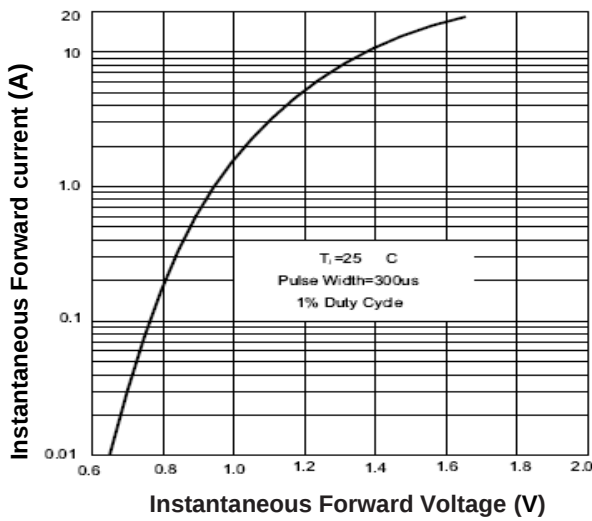


Fig.5- Typical Reverse Characteristics

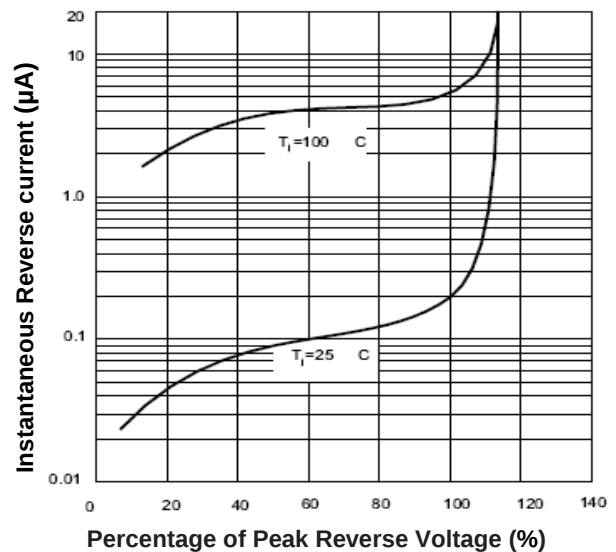
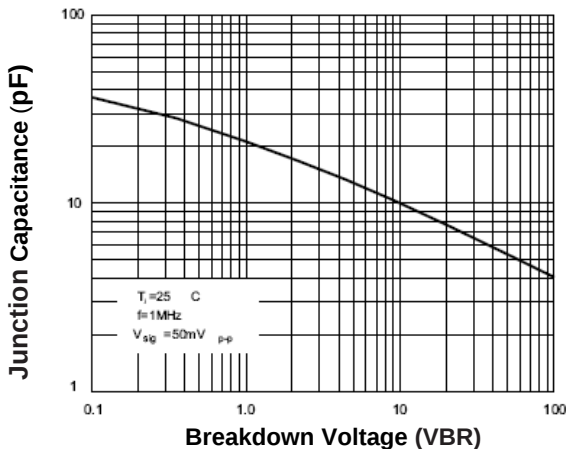
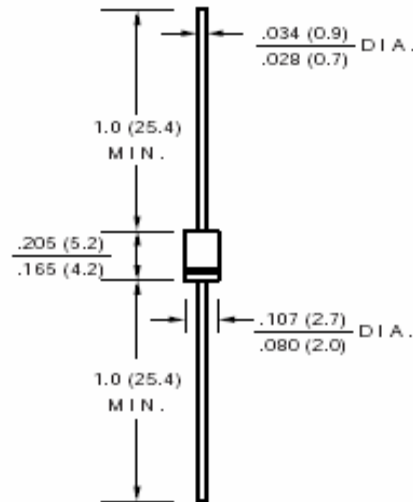


Fig.6- Typical Junction Capacitance



Dimensions in inch (mm)

1N4001~1N4007



DO204AL
(DO-41)

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General Purpose Silicon Rectifier

1N5400 ~1N5408

Features

- Low forward voltage drop
- Low leakage current
- High forward surge current capability
- High temperature soldering guaranteed 250°C/10 seconds
/.0375" (9.5mm) lead length
- RoHS and REACH Compliant



Mechanical Data

Case:	DO-201AD(DO-27), transfer molded plastic
Epoxy:	Meets UL 94V-0 flammability rating
Terminals:	Plated axial leads, solderable per MIL-STD-202E, Method 208C
Polarity:	Cathode indicated by color band
Mounting position:	Any
Weight:	0.04 Ounce, 1.12 gram

Maximum Ratings ($T_{Ambient}=25^{\circ}\text{C}$ unless noted otherwise)

Symbol	Description	1N5400	1N5401	1N5402	1N5404	1N5406	1N5407	1N5408	Unit	Conditions
VRRM	Max Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V	
VRMS	Max RMS Voltage	35	70	140	280	420	560	700	V	
VDC	Max DC Blocking Voltage	50	100	200	400	600	800	1000	V	
IF(AV)	Max Average Forward Rectified Current	3.0							A	.0375" (9.5mm) lead length at $T_A=75^{\circ}\text{C}$
IFSM	Peak Forward Surge Current	200							A	8.3ms single half sine-wave (JEDEC)
IR(AV)	Max Full Load Reverse Current	10							μA	Full cycle average .0375" (9.5mm) lead length
TJ, TSTG	Operating and Storage Temperature Range	-50 to +150							$^{\circ}\text{C}$	

Electrical Characteristics ($T_{Ambient}=25^{\circ}\text{C}$ unless noted otherwise)

Symbol	Description	1N5400	1N5401	1N5402	1N5404	1N5406	1N5407	1N5408	Unit	Conditions
V _F	Max Instantaneous Forward Voltage	1.1							V	I _F (AV)=3.0A
I _R	Max DC Reverse Current at Rated DC Blocking Voltage	5							μA	TA=25℃
		100								TA=100℃
C _J	Typical Junction Capacitance	50							pF	At 1MHz, reversed voltage of 4V
Rθ-JA	Typical Thermal Resistance	30							℃/W	Note 2

Note:

- Single phase, half wave, 60Hz, resistive or inductive load. Derate current by 20% for capacitive load
- Thermal resistance from junction to ambient at .375" (9.5mm) lead length, PCB mounted with copper pad area of 0.2" x 0.2" (5x5mm).

Typical Characteristics Curves

1N5400 ~1N5408

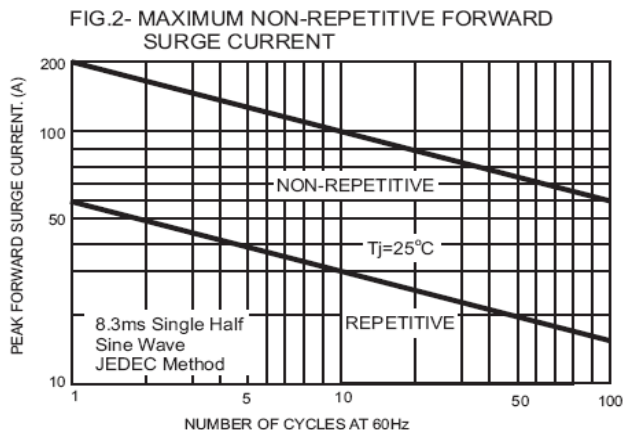
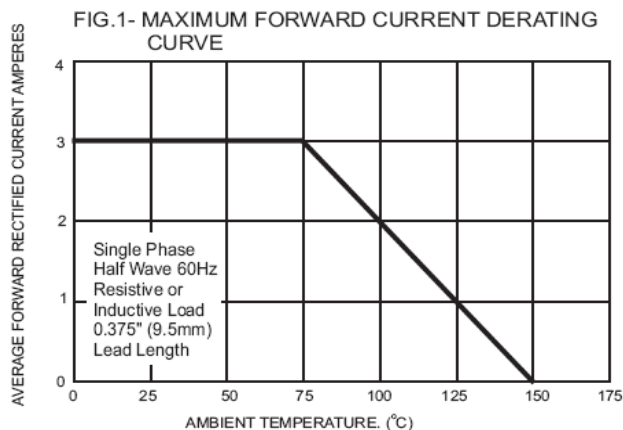


FIG.3- TYPICAL FORWARD CHARACTERISTICS

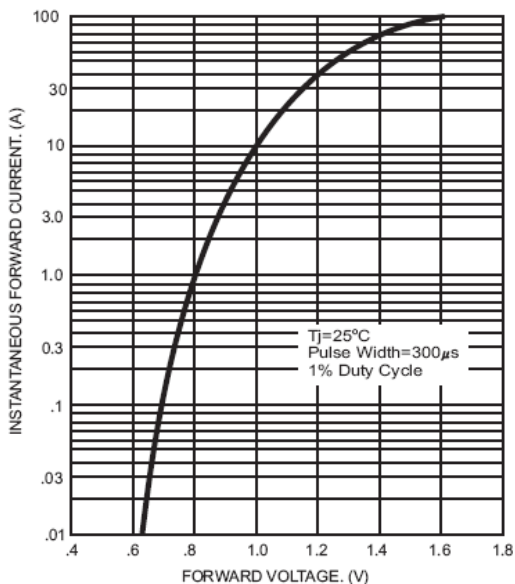


FIG.4- TYPICAL JUNCTION CAPACITANCE

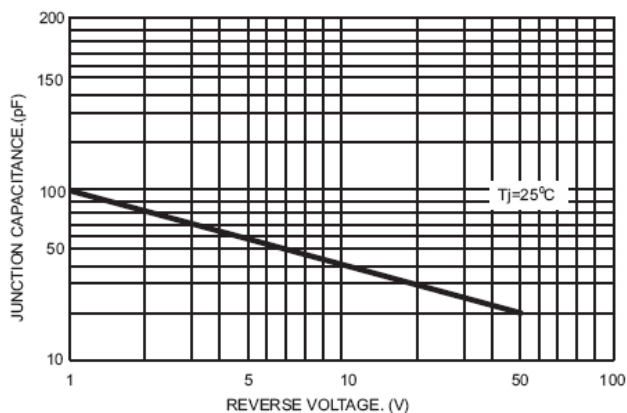
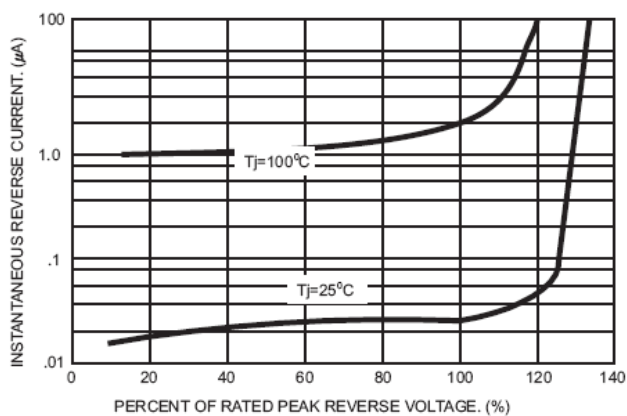
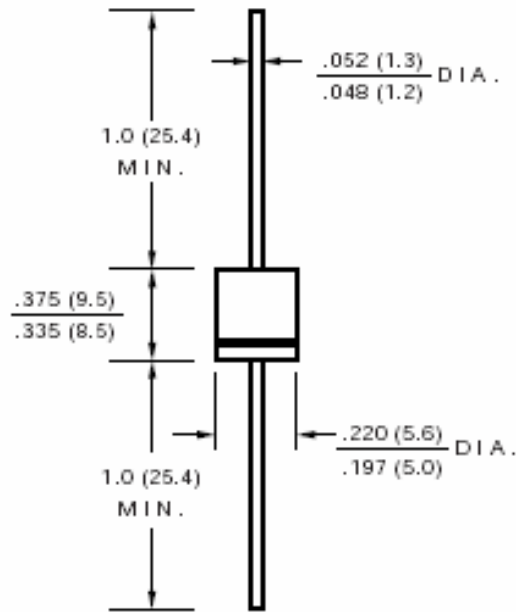


FIG.5- TYPICAL REVERSE CHARACTERISTICS





DO201AD
(DO-27)

1N5400 ~1N5408

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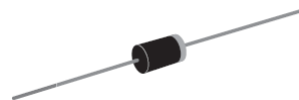
sales@lumimaxusa.com

Schottky Barrier Rectifier

1N5817 ~ 1N5819

Features

- Overvoltage protection
- Low forward voltage
- Low power loss, high efficiency
- High surge current capability
- High temperature soldering guaranteed 250°C/10 seconds, 0.375" (9.5mm) lead length
- RoHS and REACH Compliance



DO204AL
(DO-41)

RoHS
COMPLIANT

Mechanical Data

Case:	Transfer molded plastic
Polarity	Color band denotes cathode end
Epoxy:	UL94V – 0 rate flame retardant
Lead:	Plated axial lead, solderable per MIL-STD-202E method 208C
Mounting position:	Any
Weight:	0.012 ounce, 0.33 gram

Maximum Ratings ($T_{Ambient}=25^{\circ}\text{C}$ unless noted otherwise)

Symbol	Description	1N5817	1N5818	1N5819	Unit	Conditions
VRRM	Max Recurrent Peak Reverse Voltage	20	30	40	V	
VRMS	Max RMS Voltage	14	21	28	V	
VDC	Max DC Blocking Voltage	20	30	40	V	
I(AV)	Max Average Forward Rectified Current	1.0			A	0.375 (9.5MM) TC=90°C (Note 1)
IFSM	Peak Forward Surge Current	25			A	JEDEC method
TJ,TSTG	Operating and Storage Temperature Range	-55 to +125, -55 to +125			°C	

Electrical Characteristics ($T_{Ambient}=25^{\circ}\text{C}$ unless noted otherwise)

Symbol	Description	1N5817	1N5818	1N5819	Unit	Conditions
V _F	Max Instantaneous Forward Voltage	0.450	0.550	0.600	V	1.0A
		0.750	0.875	0.900		3.0A
I _R	Max DC Reverse Current at Rated DC Blocking Voltage	1.0			mA	T _A =25℃
		10				T _A =100℃
R _{θ-JA}	Typical Thermal Resistance	50			℃/W	Note 1
C _J	Typical Junction Capacitance	110			pF	Measured at 1.0MHz / 4.0V

Note:

- Thermal resistance from junction to ambient with 0.375" (9.5mm) lead length, PCB mounted, with 1.5" x 1.5" (38cm x 38cm) copper pads

Typical Characteristics Curves

FIG. 1 - FORWARD CURRENT DERATING CURVE

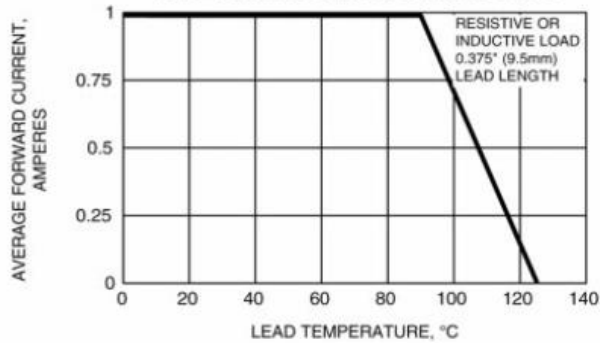


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

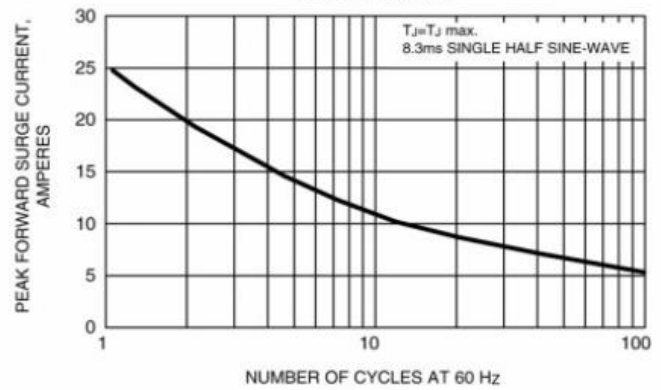


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

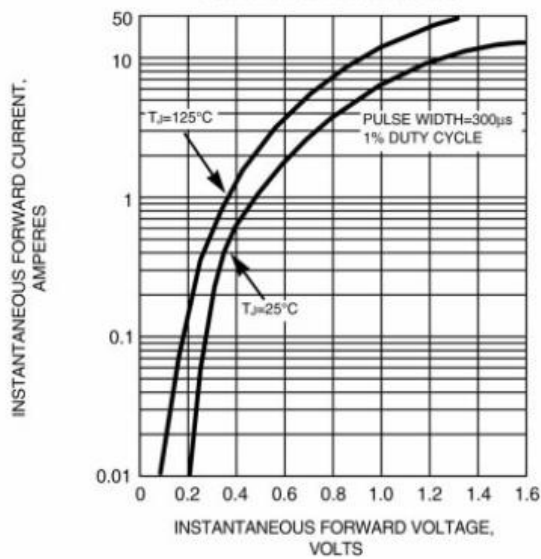


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

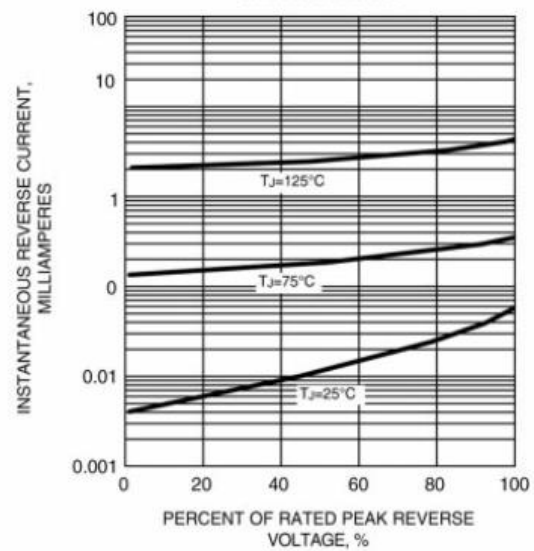


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

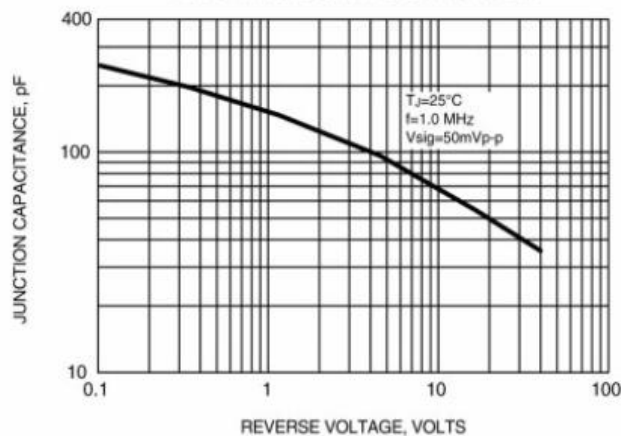
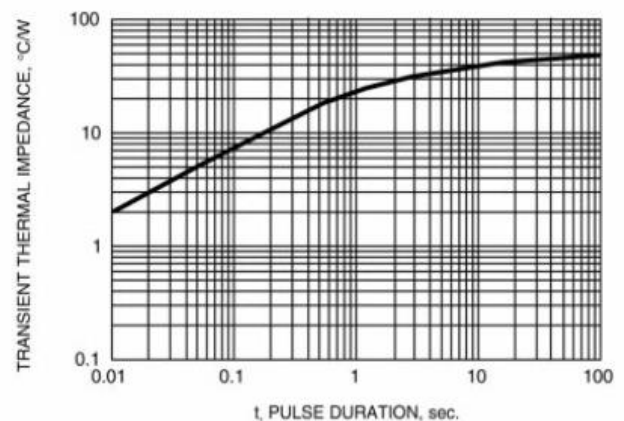
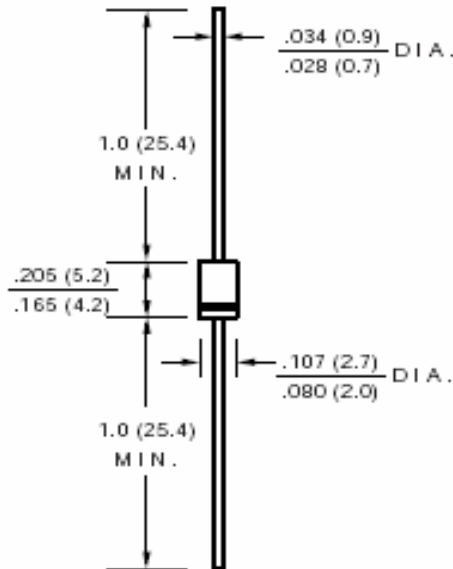


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE



Dimensions in inches (mm)

1N5817 ~ 1N5819



DO204AL
(DO-41)

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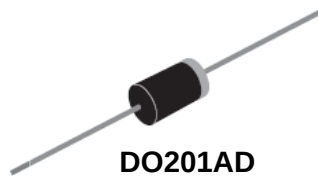
sales@lumimaxusa.com

Schottky Barrier Rectifier

1N5820 ~1N5822

Features

- Fast switching speed
- Low forward voltage
- Low power loss, high efficiency
- High surge current capability
- High temperature soldering guaranteed:
260°C/10 seconds, 0.375" (9.5mm) lead length
- RoHS and REACH Compliance



DO201AD
(DO-27)



RoHS
COMPLIANT

Mechanical Data

Case:	Transfer molded plastic
Polarity	Color band denotes cathode end
Epoxy:	UL94V – 0 rate flame retardant
Lead:	Plated axial lead, solderable per MIL-STD-202E method 208C
Mounting position:	Any
Weight:	0.042 ounce, 1.19 gram

Maximum Ratings ($T_{Ambient}=25^{\circ}\text{C}$ unless noted otherwise)

Symbol	Description	1N5820	1N5821	1N5822	Unit	Conditions
VRRM	Max Recurrent Peak Reverse Voltage	20	30	40	V	
VRMS	Max RMS Voltage	14	21	28	V	
VDC	Max DC Blocking Voltage	20	30	40	V	
I(AV)	Max Average Forward Rectified Current	3.0			A	0.375 (9.5MM) TL=95°C
IFSM	Peak Forward Surge Current	80			A	JEDEC method
TJ,TSTG	Operating and Storage Temperature Range	-55 to +125, -55 to +125			°C	

Electrical Characteristics ($T_{Ambient}=25^{\circ}\text{C}$ unless noted otherwise)

Symbol	Description	1N5820	1N5821	1N5822	Unit	Conditions
V_F	Max Instantaneous Forward Voltage	0.475	0.500	0.525	V	3.0A
		0.850	0.900	0.950		9.4A
I_R	Max DC Reverse Current at Rated DC Blocking Voltage	2.0			mA	T _A =25 °C
		20				T _A =100 °C
R_{θ-JA}	Typical Thermal Resistance	40			°C/W	Note 1
C_J	Typical Junction Capacitance	250			pF	Measured at 1.0MHz / 4.0V

Note:

- Thermal resistance from junction to ambient with 0.375" (9.5mm) lead length, PCB mounted, with 2.5" x 2.5" (63.5cm x 63.5cm) copper pads

RATINGS AND CHARACTERISTIC CURVES

1N5820 ~1N5822

FIG.1 - FORWARD CURRENT DERATING CURVE

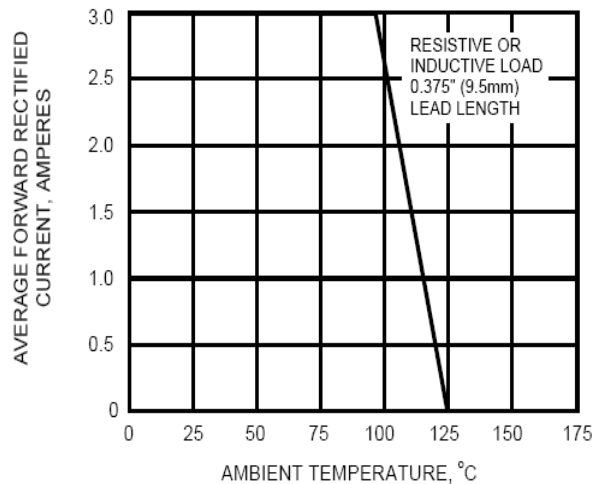


FIG.2 - MAXIMUM NON-REPETITIVE
PEAK FORWARD SURGE CURRENT

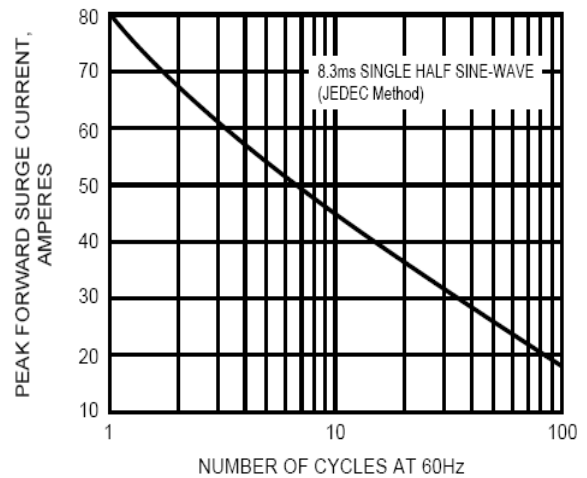


FIG.3 - TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS

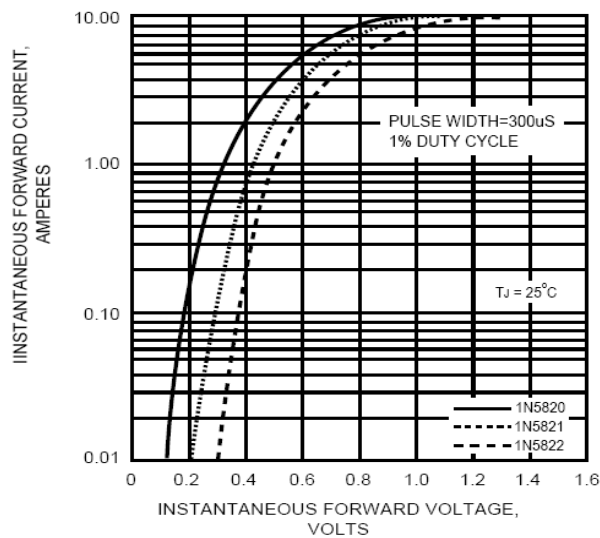


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

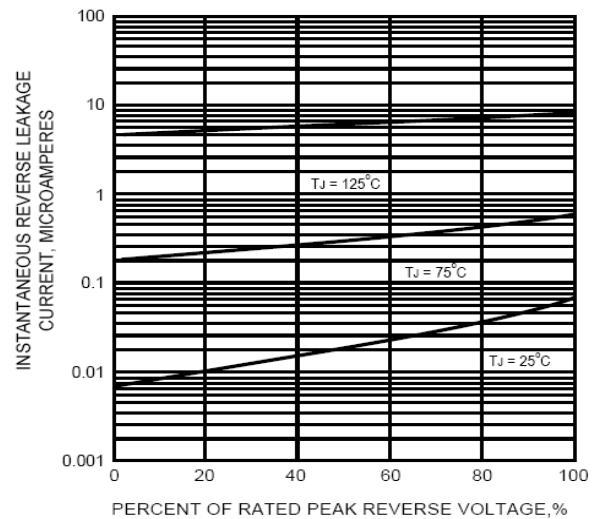


FIG.5 - TYPICAL JUNCTION CAPACITANCE

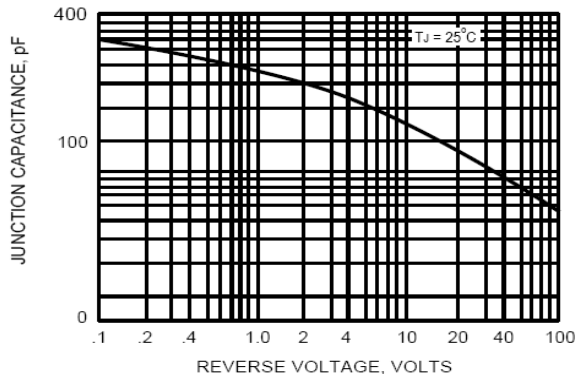
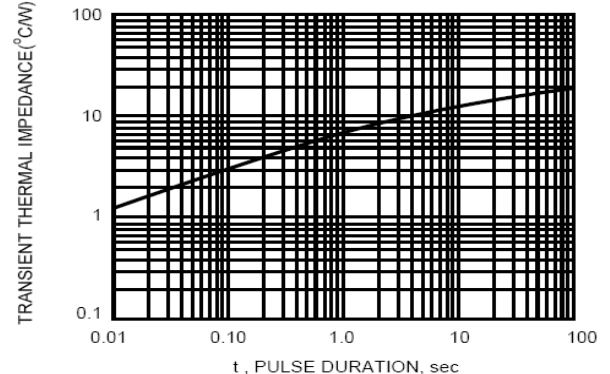
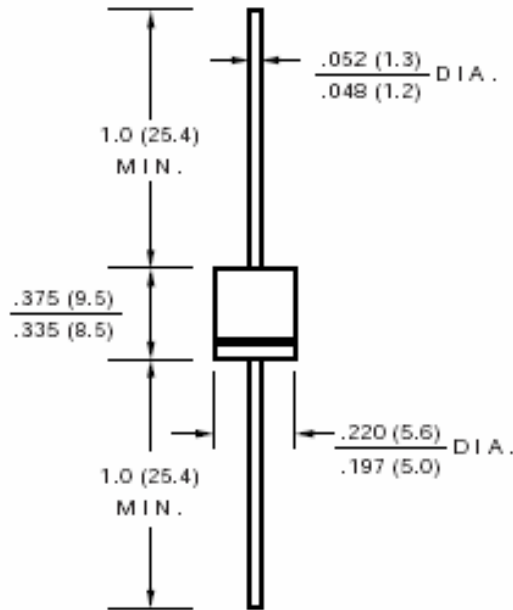


FIG.6 - TYPICAL TRANSIENT THERMAL IMPEDANCE



Dimensions in inches (mm)

1N5820 ~1N5822



DO201AD
(DO-27)

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Switching Diode

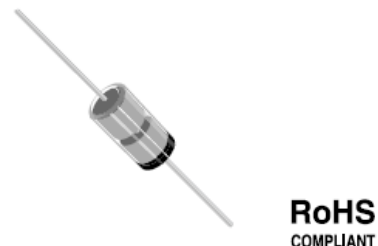
1N4148

Features

- Silicon Epitaxial Planer Diode
- Fast Switching speed
- General purpose switching application
- Also available in the SOD-123 package as the 1N4148W, and the Quadro MELF as the LS4148, and the Mini-MELF as the LL4148

Mechanical Data

Case:	DO-35 Glass case
Terminals:	Plated axial leads, solderable per MIL-STD-202E, Method 208C
Polarity:	Color band denotes cathode end
Mounting position:	Any
Weight:	0.0045 Ounce, 0.13 gram, approx



DO-35

**RoHS
COMPLIANT**

Maximum Ratings ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description	1N4148	Unit	Conditions
V_{RRM}	Non-Repetitive Peak Reverse Voltage	100	V	
V_{RMS}	Max Repetitive Peak Reverse Voltage	75	V	
I_{FM}	Forward Continuous Current	300	mA	
T_{rr}	Max Reverse Recovery Time	4	nS	$I_F=10mA, I_R=10mA, I_{RR}=1mA, R_L=100\Omega$
I_{FSM}	Non-Repetitive Peak Forward Surge Current	4	Amps	$T=1.0\mu S, T=1.0S$
P_{TOT}	Power dissipation (Note1)	500	mW	
T_J, T_{STG}	Operating and Storage Temperature	-65 to +175	$^{\circ}C$	

Electrical Characteristics ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

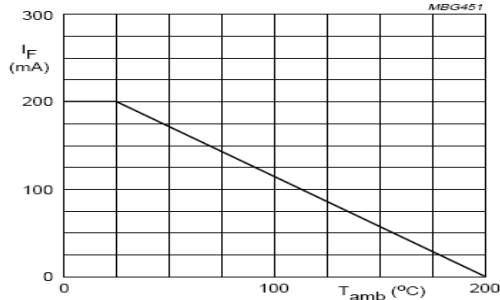
Symbol	Description	1N4148	Unit	Conditions
V_F	Max Instantaneous Forward Voltage	1.0	V	10mA
I_R	Max DC Reverse Current at Rated DC Blocking Voltage	5.0	μA	$V_R=75V$
		50		$V_R=20V, T_J=150^{\circ}C$
		25		$V_R=20V$
C_J	Typical Junction Capacitance	4.0	pF	$V_f=1V, f=1MHz$
$R_{\theta-JA}$	Typical Thermal Resistance	350	$^{\circ}C/W$	

Note:

1. Valid provided leads at a distance of 0.31" (8mm) from case are kept at ambient temperature

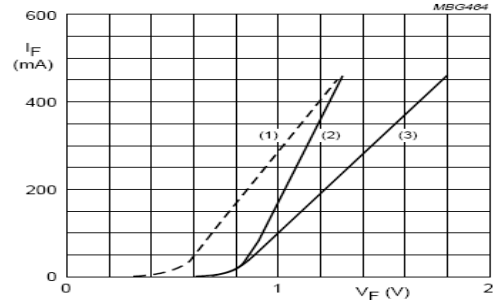
Typical Characteristics Curves

1N4148



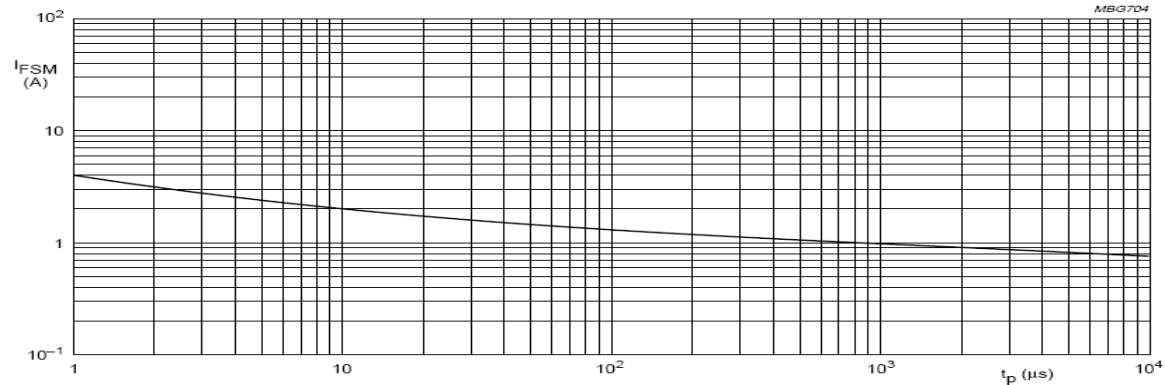
Device mounted on an FR4 printed-circuit board; lead length 10 mm.

Fig.2 Maximum permissible continuous forward current as a function of ambient temperature.



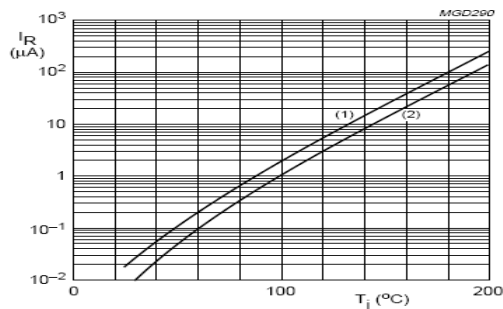
- (1) $T_J = 175^\circ\text{C}$; typical values.
- (2) $T_J = 25^\circ\text{C}$; typical values.
- (3) $T_J = 25^\circ\text{C}$; maximum values.

Fig.3 Forward current as a function of forward voltage.



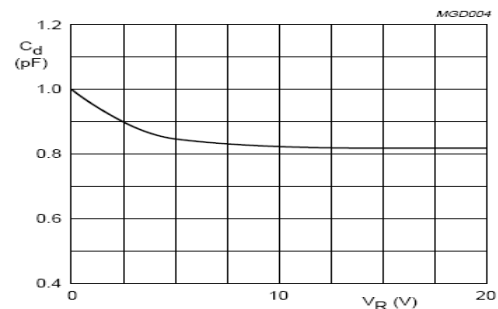
Based on square wave currents.
 $T_J = 25^\circ\text{C}$ prior to surge.

Fig.4 Maximum permissible non-repetitive peak forward current as a function of pulse duration.



- (1) $V_R = 75\text{ V}$; typical values.
- (2) $V_R = 20\text{ V}$; typical values.

Fig.5 Reverse current as a function of junction temperature.

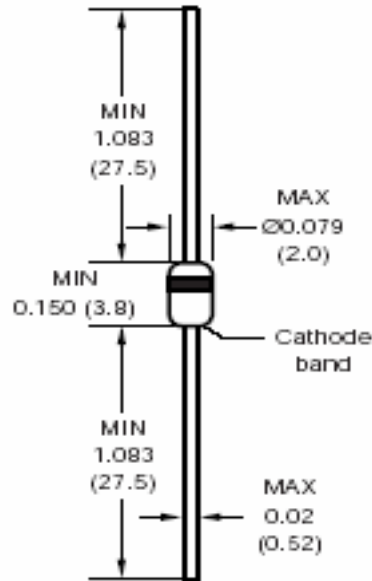


$f = 1\text{ MHz}$; $T_J = 25^\circ\text{C}$.

Fig.6 Diode capacitance as a function of reverse voltage; typical values.

Dimensions in inch (mm)

1N4148



DO-35

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Surface Mount Glass Passivated Rectifier

S1A ~S1M

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Built-in strain relief, ideal for automated placement
- Glass passivated chip junction
- High temperature soldering guaranteed 260°C/ 10 seconds
- RoHS and REACH compliance



DO-214AC (SMA)



RoHS
COMPLIANT

Mechanical Data

Case:	DO-214AC, transfer molded plastic
Epoxy:	Meets UL 94V-0 flammability rating
Terminals:	Solder plated, solderable per MIL-STD 750, Method 2026
Polarity:	Cathode indicated by color band
Mounting position:	Any
Weight:	0.002 Ounce, 0.064 gram

Maximum Ratings ($T_{Ambient}=25^{\circ}\text{C}$ unless noted otherwise)

Symbol	Description	\$1A	\$1B	\$1D	\$1G	\$1J	\$1K	\$1M	Unit	Conditions
VRRM	Max Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V	
VRMS	Max RMS Voltage	35	70	140	280	420	560	700	V	
VDC	Max DC Blocking Voltage	50	100	200	400	600	800	1000	V	
I(AV)	Max Average Forward Rectified Current	1.0							A	TA=105℃
IFSM	Peak Forward Surge Current	40					30		A	8.3ms single half sine-wave (JEDEC)
trr	Maximum Reverse Recovery Time	1.8							μS	IF=0.5A, IR=1.0A, IRR=0.25A
TJ, TSTG	Operating and Storage Temperature Range	-55 to +150							℃	

Electrical Characteristics ($T_{Ambient}=25^{\circ}\text{C}$ unless noted otherwise)

Symbol	Description	S1A	S1B	S1D	S1G	S1J	S1K	S1M	Unit	Conditions
V _F	Max Instantaneous Forward Voltage	1.1							V	I _{F(AV)} = 1.0A
I _R	Max DC Reverse Current at Rated DC Blocking Voltage	1.0					5.0		μA	TA=25℃
		50								TA=125℃
C _J	Typical Junction Capacitance	12							pF	At 1MHz, reversed voltage of 4V
R _{θ-JA}	Typical Thermal Resistance	75					85		℃/W	Note 2
R _{θ-JL}		27					30			

Note:

- Single phase, half wave, 60Hz, resistive or inductive load. Derate current by 20% for capacitive load
- Thermal resistance from junction to ambient at .375" (9.5mm) lead length, PCB mounted

Typical Characteristics Curves

S1A ~S1M

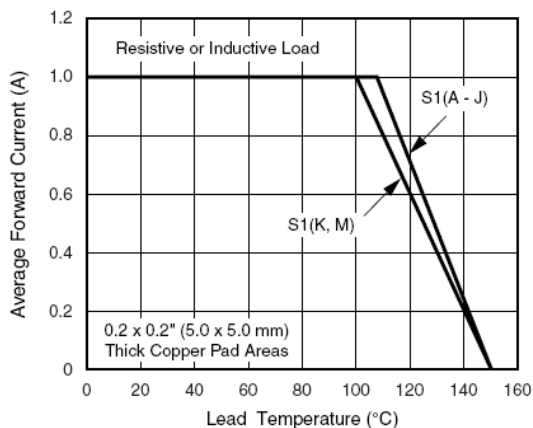


Figure 1. Forward Current Derating Curve

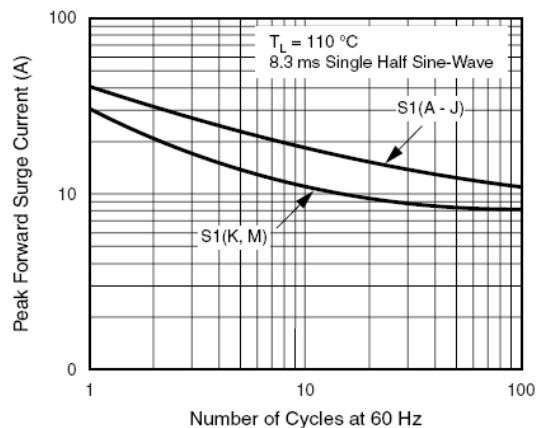


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

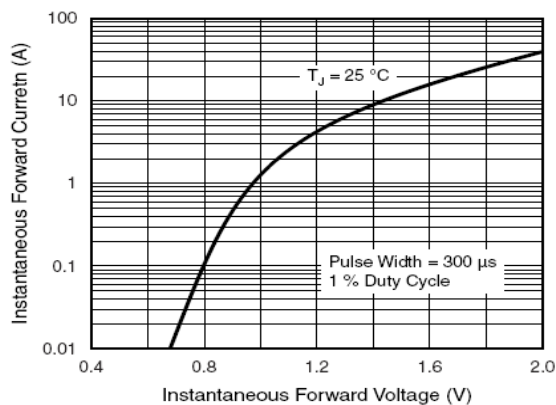


Figure 3. Typical Instantaneous Forward Characteristics

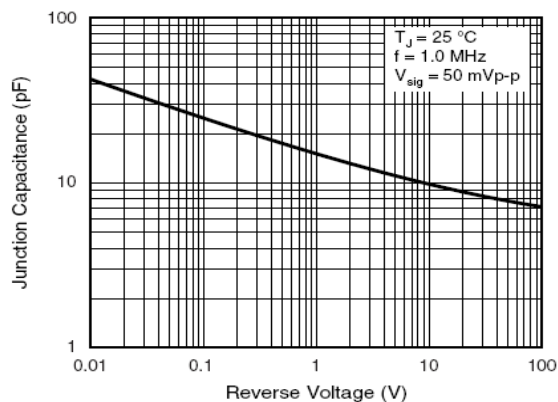


Figure 5. Typical Junction Capacitance

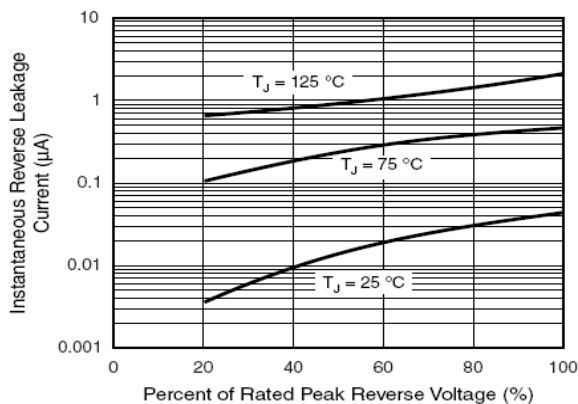


Figure 4. Typical Reverse Leakage Characteristics

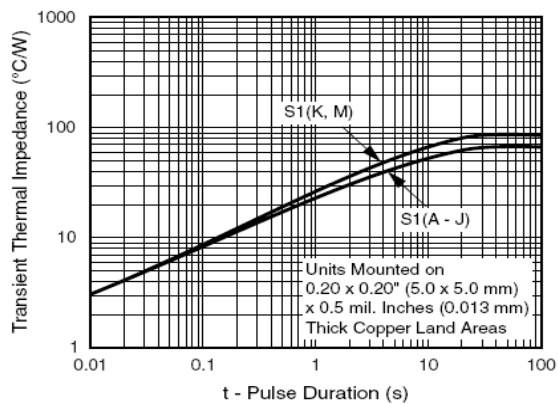
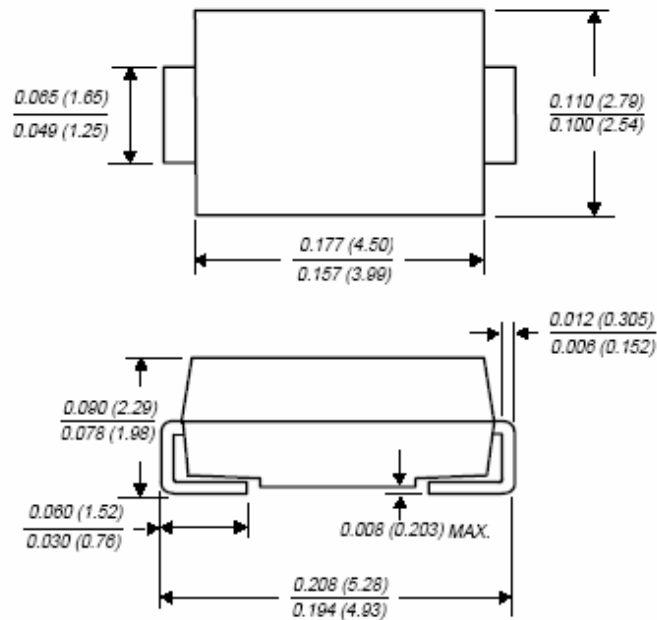


Figure 6. Typical Transient Thermal Impedance

Dimensions in inch (mm)

S1A ~S1M



Dimensions in inches and (millimeters)

DO-214AC(SMA)

Contact us:

US Headquarter

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Surface Mount Fast Recovery Rectifier

RS1A~RS1M

Features

- Plastic package has UL flammability classification 94V-0
- Glass passivated chip junction
- Built in strain relief
- Fast switching speed for high efficiency
- High temperature soldering guaranteed:
260°C/10 seconds, 0.375" (9.5mm) lead length
- RoHS and REACH Compliance



DO-214AC (SMA)

Mechanical Data

Case:	JEDEC DO-214AC transfer molded plastic
Polarity:	Color band denots cathode end
Terminals:	Solder plated, solderable per MIL-STD-750 method 2026
Weight:	0.002 ounce, 0.064 gram

Maximum Ratings ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description	RS1A	RS1B	RS1D	RS1G	RS1H	RS1K	RS1M	Unit	Conditions
VRRM	Max Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V	
VRMS	Max RMS Voltage	35	70	140	280	420	560	700	V	
VDC	Max DC Blocking Voltage	50	100	200	400	600	800	1000	V	
I(AV)	Max Average Forward Rectified Current	1.0							A	TL=100℃
IFSM	Peak Forward Surge Current	30							A	JEDEC method
TJ,TSTG	Operating and Storage Temperature Range	-55 to +150, -55 to +150							℃	
Rθ-JA	Typical Thermal Resistance	105							℃/W	Note 2
Rθ-JL		32								

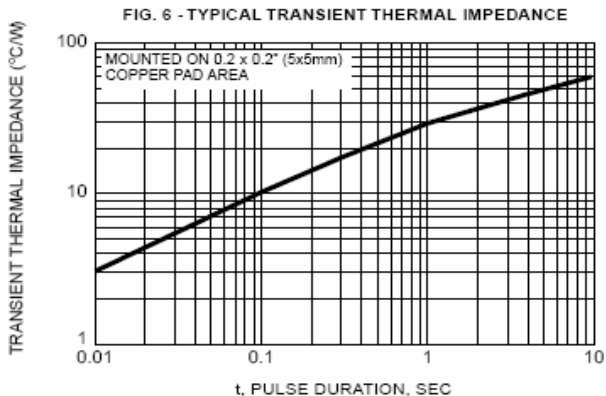
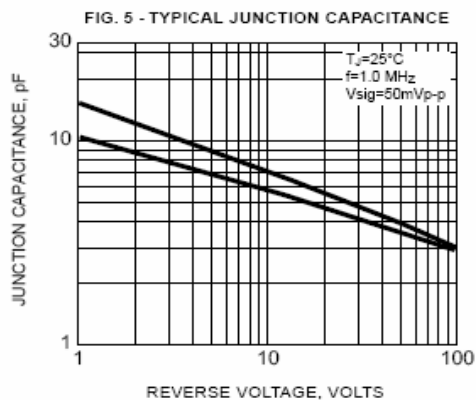
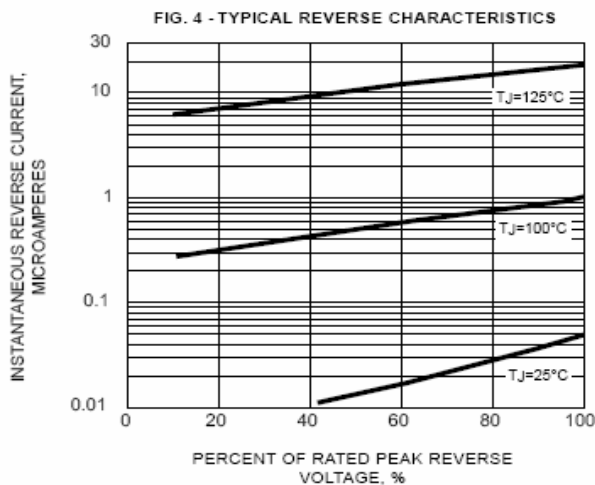
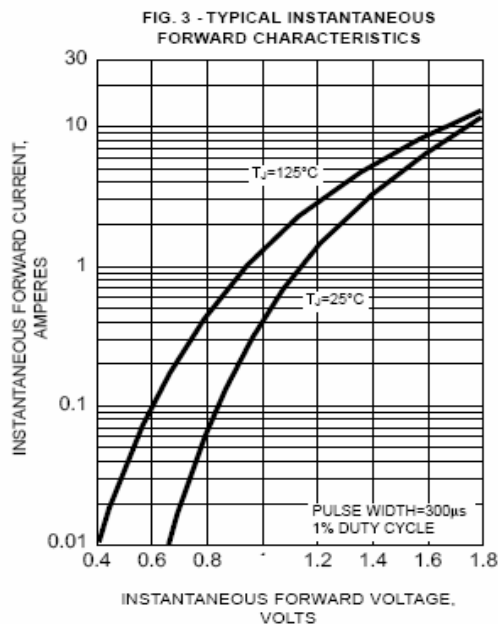
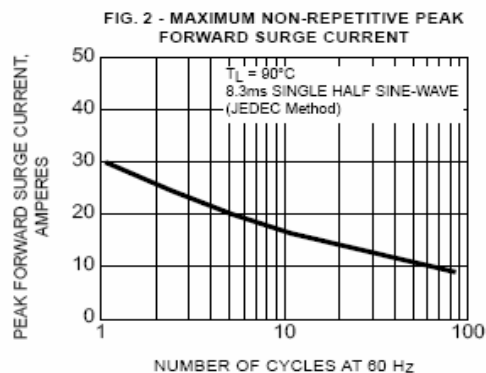
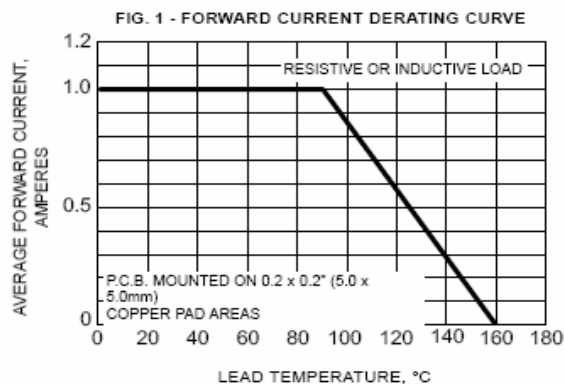
Electrical Characteristics ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description	RS1A	RS1B	RS1D	RS1G	RS1J	RS1K	RS1M	Unit	Conditions
VF	Max Instantaneous Forward Voltage	1.3							V	1.0A
IR	Max DC Reverse Current at Rated DC Blocking Voltage	5.0							μA	TA=25°C
		50							mA	TA=125°C
TRR	Maximum reverse recovery time	150		250			500		nS	Note 1
CJ	Typical Junction Capacitance	10			7				pF	Measured at 1.0MHz / 4.0V

Note:

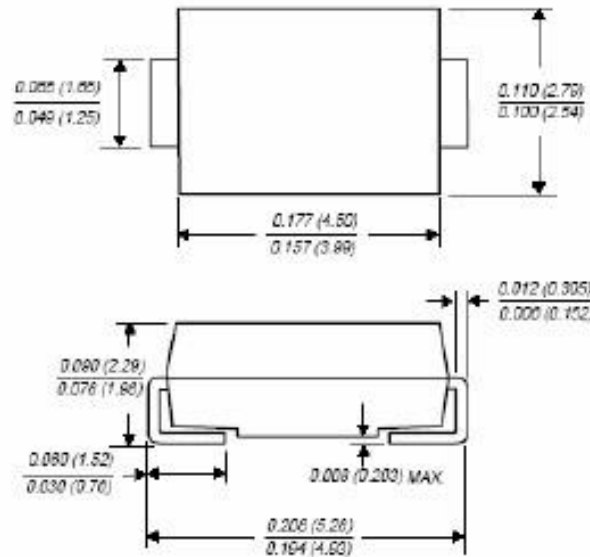
- Reverse recovery test conditions: $I_F = 0.5A$, $I_R = 1.0A$, $I_{RR} = 0.25A$
- Thermal resistance from junction to ambient and from junction to lead mounted on PCB with 0.2" x 0.2" (5.0mm x 5.0mm) copper pad areas.

RATINGS AND CHARACTERISTIC CURVES RS1A ~ RS1M



Dimensions in inches (mm)

RS1A~RS1M



Dimensions in inches and (millimeters)

DO-214AC (SMA)

Contact us:

US HEADQUARTERS

Lumimax Optoelectronic Technology

44611 S. Grimmer Blvd., Fremont, CA 94538

Tel: 510-241-9686

sales@lumimaxusa.com

Surface Mount Schottky Rectifier

SS22B~SS210B

Features

- Low Forward Voltage Drop
- Ideal for surface mounted applications
- High Surge Current Capability
- High temperature soldering guaranteed 260°C/ 10 seconds
- RoHS and REACH compliance



SMB



RoHS
COMPLIANT

Mechanical Data

Case:	Transfer molded plastic
Epoxy:	Meets UL 94V-0 flammability rating
Terminals:	Solder plated, solderable per MIL-STD 750, Method 2026
Polarity:	Cathode indicated by color band
Mounting position:	Any
Weight:	0.093 gram

Maximum Ratings ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description	SS22B	SS23B	SS24B	SS25B	SS26B	SS28B	SS210B	Unit	Conditions
VRRM	Max Recurrent Peak Reverse Voltage	20	30	40	50	60	80	100	V	
VRMS	Max RMS Voltage	14	21	28	35	42	56	70	V	
VDC	Max DC Blocking Voltage	20	30	40	50	60	80	100	V	
Io	Max Average Forward Rectified Current at Ambient Temperature	2.0							A	
IFSM	Peak Forward Surge Current	50							A	8.3ms single half sine-wave
TJ, TSTG	Operating and Storage Temperature Range	-55 to +125							°C	

Electrical Characteristics ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description	SS22B	SS23B	SS24B	SS25B	SS26B	SS28B	SS210B	Unit	Conditions
V _F	Max Instantaneous Forward Voltage	0.6			0.75		0.85		V	I _{F(AV)} = 1.0A
I _R	Max DC Reverse Current at Rated DC Blocking Voltage	0.5							mA	TA=25℃
		10								TA=100℃
C _J	Typical Junction Capacitance	110					20		pF	At 1MHz, reversed voltage of 4V
R _{θ-JA}	Typical Thermal Resistance	75							℃/W	
R _{θ-JL}		17								

Note:

12. Single phase, half wave, 60Hz, resistive or inductive load. Derate current by 20% for capacitive load

Typical Characteristics Curves

SS22B~SS210B

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

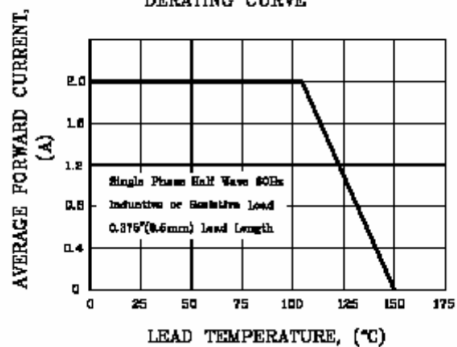


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

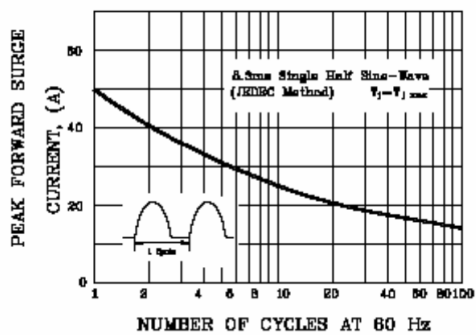


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

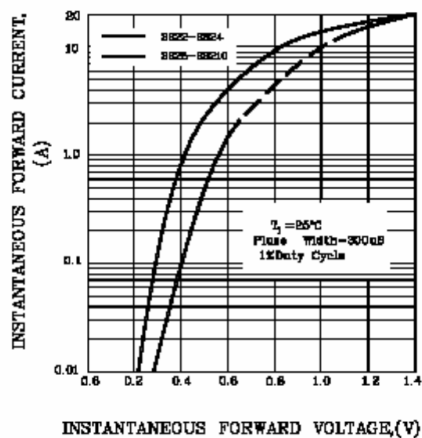
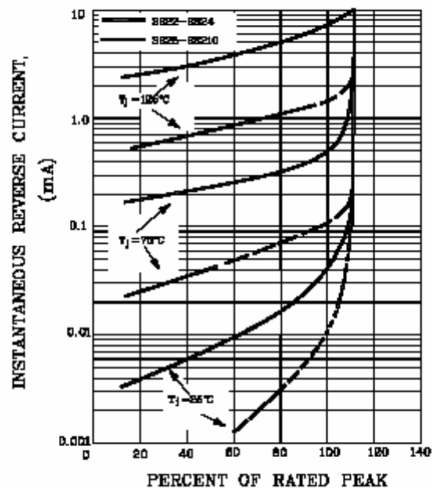
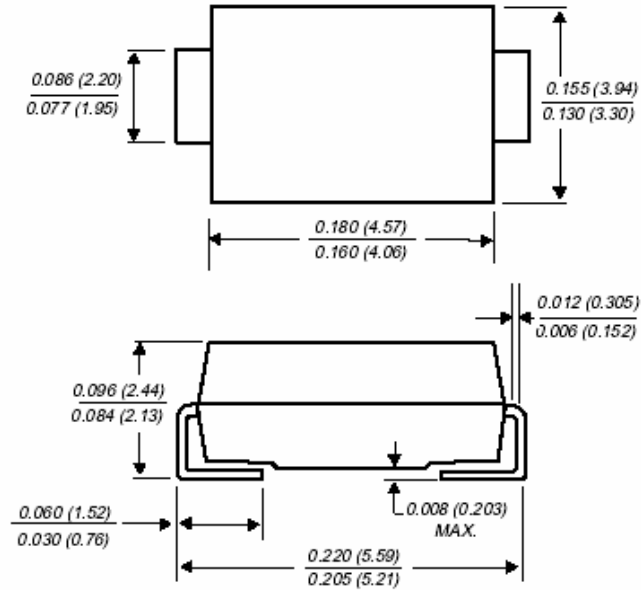


FIG.4-TYPICAL REVERSE CHARACTERISTICS



Dimensions in inch (mm)

SS22B~SS210B



Dimensions in inches and (millimeters)

Contact us:

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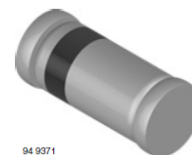
sales@lumimaxusa.com

Switching Diode

LL4148

Features

- Silicon Epitaxial Planer Diode
- Fast Switching Speed
- General Purpose Switching Applications
- Also available in the SOD-123 packages as the 1N4148W,
- And the Quadro MELF as the LS4148, and the DO-35 as the 1N4148
- RoHS and REACH Compliance



RoHS
COMPLIANT

Mechanical Data

Case:	Mini-Melf
Pingout:	
Terminals:	Solderable per MIL-STD-202E, Method 208C
Polarity:	Color band denotes cathode end
Mounting position:	Any
Weight:	0.00175 Ounce, 0.05 gram, approx

Maximum Ratings ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description	LL4148	Unit	Conditions
VRRM	Non-Repetitive Peak Reverse Voltage	100	V	
VRMS	Max Repetitive Peak Reverse Voltage	75	V	
IFM	Forward Continuous Current	300	mA	
trr	Max Reverse Recovery Time	4	nS	IF= 10mA, IR=10mA, IRR=1mA, RL=100Ω
IFSM	Non-Repetitive Peak Forward Aurge Current	2.0 1.0	Amps	T=1.0μS, T=1.0S
PTOT	Power dissipation	500	mW	Note 1
TJ, TSTG	Operating and Storage Temperature	-65 to +175	°C	

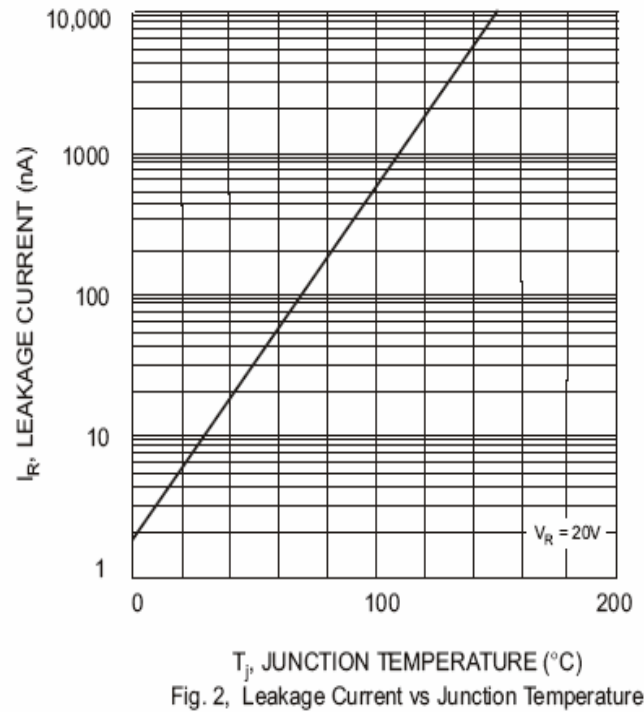
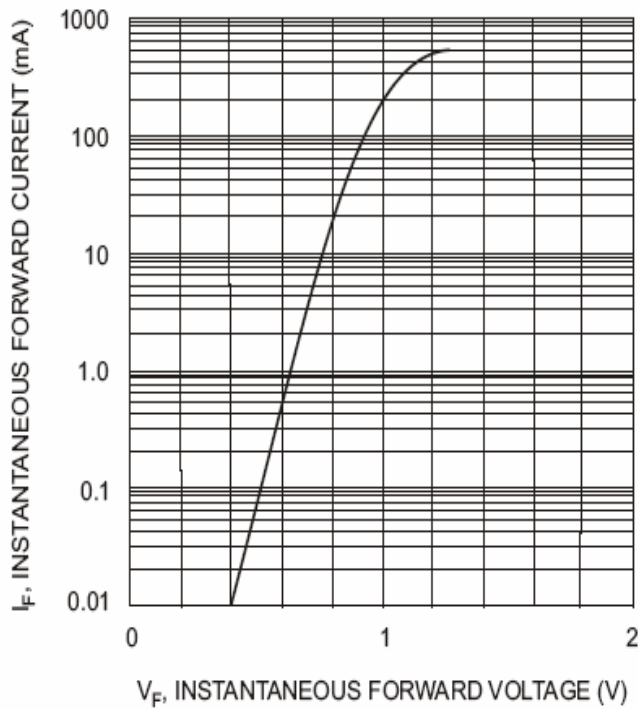
Electrical Characteristics ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description	LL4148	Unit	Conditions
VF	Max Instantaneous Forward Voltage	1.0	V	@10mA
IR	Max DC Reverse Current at Rated DC Blocking Voltage	5.0 50 30	μA	VR=75V VR=75V, TJ=150°C VR=25V, TJ=150°C
CJ	Typical Junction Capacitance	4.0	pF	Vf=1V, f=1MHZ
Rθ-JA	Typical Thermal Resistance	300	°C/W	

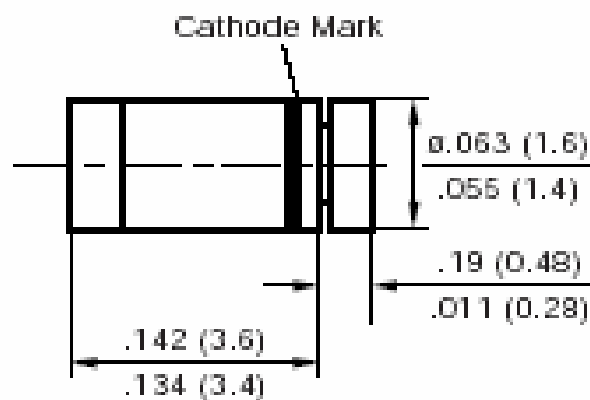
Note:

1. Valid provided leads at a distance of 0.31" (8mm) from case are kept at ambient temperature

Ratings And Characteristic Curve LL4148:



Dimensions in inch (mm)



MINI-MELF

Contact us:

US HEADQUARTER

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Lumimax Optoelectronic Technology

Zener Diodes 1N47xxA-SERIES

Zener Voltage: 3.3V~75V

Peak Pulse Power: 1W

DO-41 (Glass) Package

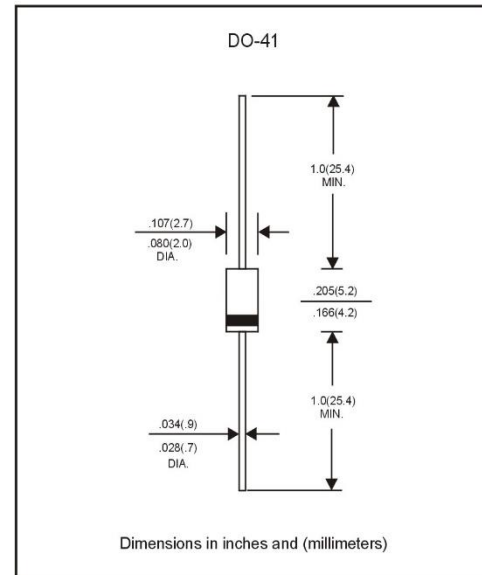
Features:

- Low Zener impedance
- Low regulation factor
- Glass passivated junction
- High temperature soldering guaranteed
260°C/10s/9.5mm lead length at 5 lbs tension

Mechanical Data:

- Case: JEDEC DO-41 (Glass) molded glass body
- Terminals: Plated axial leads, solderable per MIL-STD 750, method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any

Package outline



Maximum Ratings and Electrical Characteristics

(Ratings at 25° C ambient temperature unless otherwise specified)

Zener current see Table Characteristics

Power dissipation =1000mW

Junction temperature T_j = 200° C

Storage temperature range: TSTG= -65° C to + 200°C

Thermal resistance junction ambient = 170°C/W

Forward voltage V_F =1.2V at I_F =200mA

Electrical Characteristics (at 25°C unless otherwise noted)

Mfr P/N	Voltage - Zener (Vz)	Tolerance	Power Max	Impedance (Max) (Zzt)	Current - Reverse Leakage @ Vr	Voltage - Forward (Vf) (Max) @ If
1N4728A	3.3V	±5%	1 W	10 Ohms	100 µA @ 1 V	1.2 V @ 200 mA
1N4729A	3.6V	±5%	1 W	10 Ohms	100 µA @ 1 V	1.2 V @ 200 mA
1N4730A	3.9V	±5%	1 W	9 Ohms	50 µA @ 1 V	1.2 V @ 200 mA
1N4731A	4.3V	±5%	1 W	9 Ohms	10 µA @ 1 V	1.2 V @ 200 mA
1N4732A	4.7V	±5%	1 W	8 Ohms	10 µA @ 1 V	1.2 V @ 200 mA
1N4733A	5.1V	±5%	1 W	7 Ohms	10 µA @ 1 V	1.2 V @ 200 mA
1N4734A	5.6V	±5%	1 W	5 Ohms	10 µA @ 2 V	1.2 V @ 200 mA
1N4735A	6.2V	±5%	1 W	2 Ohms	10 µA @ 3 V	1.2 V @ 200 mA
1N4736A	6.8V	±5%	1 W	3.5 Ohms	10 µA @ 4 V	1.2 V @ 200 mA
1N4737A	7.5V	±5%	1 W	4 Ohms	10 µA @ 5 V	1.2 V @ 200 mA
1N4738A	8.2V	±5%	1 W	4.5 Ohms	10 µA @ 6 V	1.2 V @ 200 mA
1N4739A	9.1V	±5%	1 W	5 Ohms	10 µA @ 7 V	1.2 V @ 200 mA
1N4740A	10V	±5%	1 W	7 Ohms	10 µA @ 7.6 V	1.2 V @ 200 mA
1N4741A	11V	±5%	1 W	8 Ohms	5 µA @ 8.4 V	1.2 V @ 200 mA
1N4742A	12V	±5%	1 W	9 Ohms	5 µA @ 9.1 V	1.2 V @ 200 mA
1N4743A	13V	±5%	1 W	10 Ohms	5 µA @ 9.9 V	1.2 V @ 200 mA
1N4744A	15V	±5%	1 W	14 Ohms	5 µA @ 11.4 V	1.2 V @ 200 mA
1N4745A	16V	±5%	1 W	16 Ohms	5 µA @ 12.2 V	1.2 V @ 200 mA
1N4746A	18V	±5%	1 W	20 Ohms	5 µA @ 13.7 V	1.2 V @ 200 mA
1N4747A	20V	±5%	1 W	22 Ohms	5 µA @ 15.2 V	1.2 V @ 200 mA
1N4748A	22V	±5%	1 W	23 Ohms	5 µA @ 16.7 V	1.2 V @ 200 mA
1N4749A	24V	±5%	1 W	25 Ohms	5 µA @ 18.2 V	1.2 V @ 200 mA
1N4750A	27V	±5%	1 W	35 Ohms	5 µA @ 20.6 V	1.2 V @ 200 mA
1N4751A	30V	±5%	1 W	40 Ohms	5 µA @ 22.8 V	1.2 V @ 200 mA
1N4752A	33V	±5%	1 W	45 Ohms	5 µA @ 25.1 V	1.2 V @ 200 mA
1N4753A	36V	±5%	1 W	50 Ohms	5 µA @ 27.4 V	1.2 V @ 200 mA
1N4754A	39V	±5%	1 W	60 Ohms	5 µA @ 29.7 V	1.2 V @ 200 mA
1N4755A	43V	±5%	1 W	70 Ohms	5 µA @ 32.7 V	1.2 V @ 200 mA
1N4756A	47V	±5%	1 W	80 Ohms	5 µA @ 35.8 V	1.2 V @ 200 mA

Suffix "A" indicate ±5% tolerance

Package: 2500pcs taped in one box