

Features

- Low Profile Package
- High Efficiency
- Low Thermal Resistance
- Lead Free Finish/RoHS Compliant (Note 1) ("P" Suffix Designates RoHS Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. "Green" Device (Note 2)
- Moisture Sensitivity Level 1

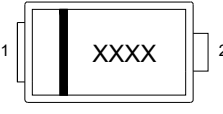
Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value				Unit
		SMD 14HL	SMD 16HL	SMD 110HL	SMD 120HL	
Peak Repetitive Reverse Voltage	V_{RRM}	40	60	100	200	V
Working Peak Reverse Voltage	V_{RWM}					
DC Blocking Voltage	V_R					
RMS Reverse Voltage	V_{RMS}	28	42	70	140	V
Average Rectified Forward Current @ See Fig.1	$I_{F(AV)}$	1				A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	I_{FSM}	30				A
Current Squared Time @ 1ms ≤ t ≤ 8.3ms	I^2t	3.735				A ² s

Marking code

Part Number	Marking code
SMD14HL	D14
SMD16HL	D16
SMD110HL	D110
SMD120HL	D120

Internal Structure

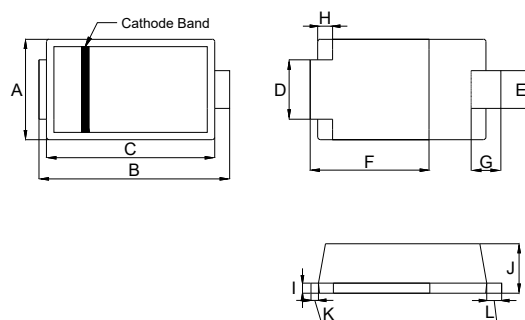
Pin	Description	Simplified outline	Graphic symbol
1	Cathode	 XXXX = Marking code	
2	Anode		

Note:

1. High temperature solder exemption applied, see EU directive annex 7a.
2. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

1 Amp Schottky Rectifier 40 to 200 Volts

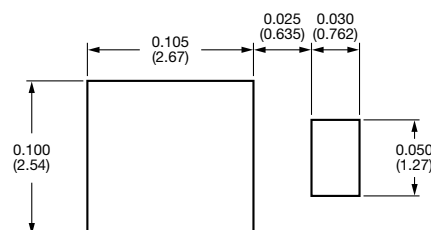
SOD-123HL



DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.074	0.086	1.88	2.18	
B	0.146	0.157	3.70	4.00	
C	0.041	0.053	3.19	3.61	
D	0.024	0.036	1.05	1.35	
E	0.087	0.102	0.61	0.91	
F	0.016	0.031	2.20	2.60	
G	0.012	0.000	0.40	0.80	
H	0.012		0.30		REF
I	0.004	0.012	0.10	0.30	
J	0.033	0.045	0.85	1.15	
K	0.000	0.012	0.00	0.30	
L	0.006	0.018	0.15	0.45	

Suggested Solder Pad Layout



Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
T_J	Operating Junction Temperature Range	SMD14HL	-55		125	°C
T_J	Operating Junction Temperature Range	SMD16HL~SMD120HL	-55		150	°C
T_{stg}	Storage Temperature Range		-55		150	°C
$R_{th(J-L)}$	Thermal Resistance from Junction to Lead	Note 1		30		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient	Note 1		90		°C/W

Note:

1. Mounted on P.C.B. with 3mm*3mm copper pad areas.

Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage SMD14HL SMD16HL SMD110HL SMD120HL	V_F	$I_F=1A; T_J=25^{\circ}C$			0.50 0.70 0.85 0.90	V
Reverse Current SMD14HL~SMD16HL SMD110HL~SMD120HL	I_R	at Rated $V_R; T_J=25^{\circ}C$ at Rated $V_R; T_J=125^{\circ}C$ at Rated $V_R; T_J=25^{\circ}C$ at Rated $V_R; T_J=125^{\circ}C$			0.1 20 0.01 5	mA
Junction Capacitance SMD14HL SMD16HL SMD110HL SMD120HL	C_J	$V_R=4V; f=1MHz; T_J=25^{\circ}C$		50 40 30 20		pF

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

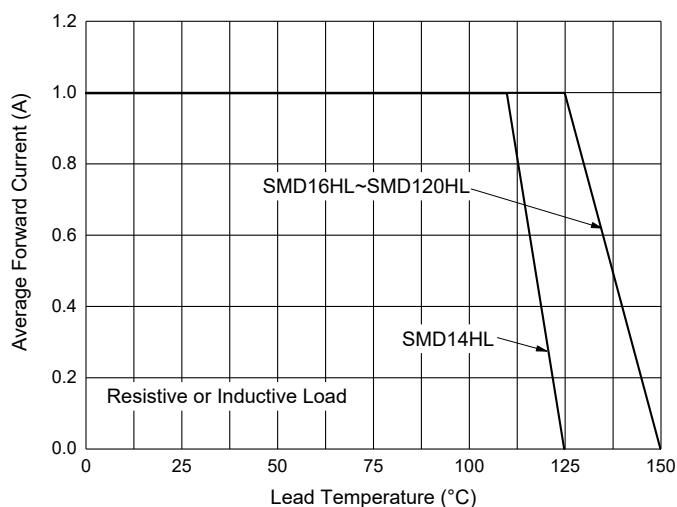


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

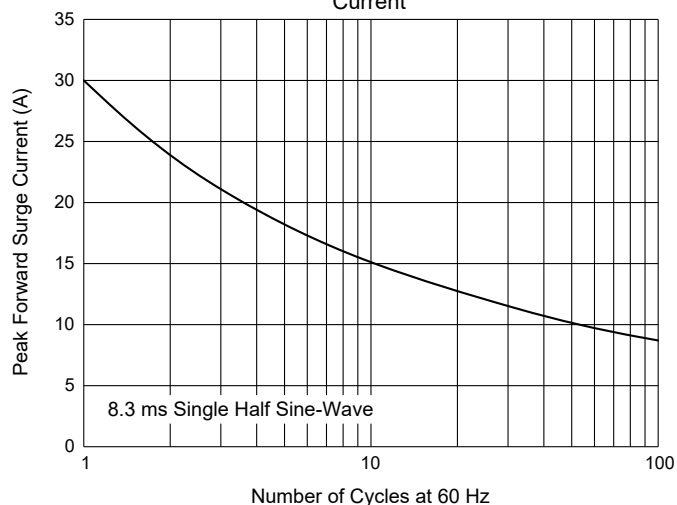


Fig. 3 - Typical Forward Characteristics

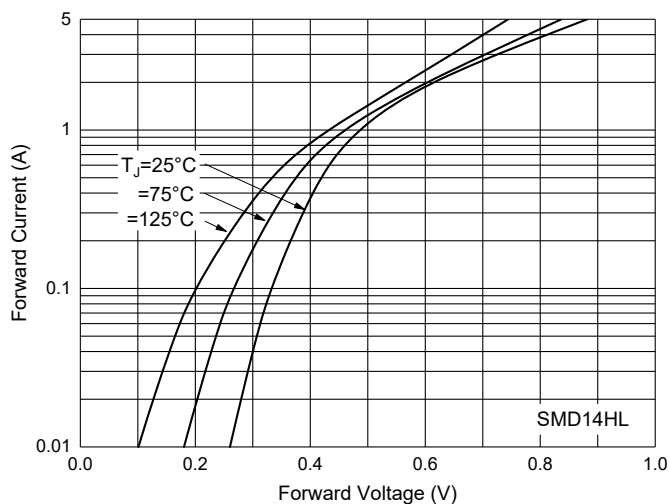


Fig. 4 - Typical Reverse Leakage Characteristics

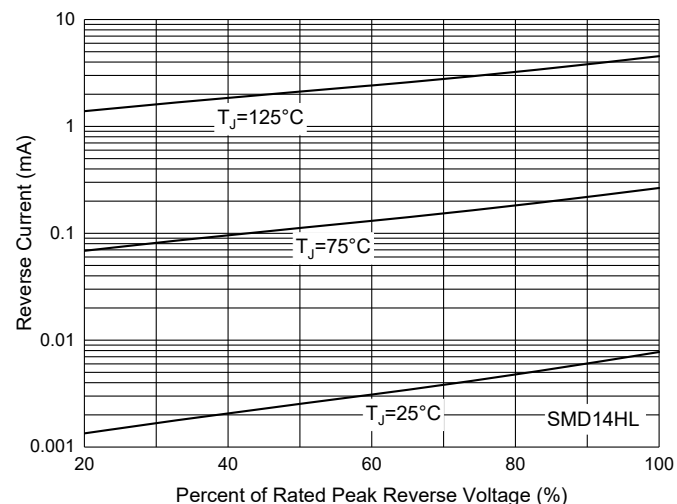


Fig. 5 - Typical Forward Characteristics

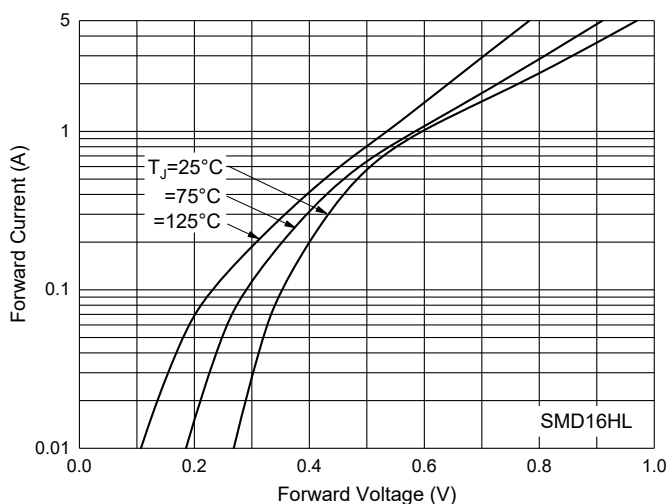
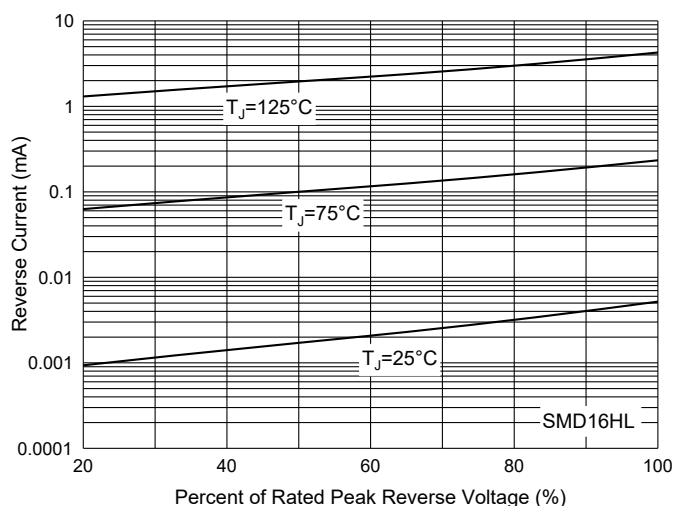


Fig. 6 - Typical Reverse Leakage Characteristics



Curve Characteristics

Fig. 7 - Typical Forward Characteristics

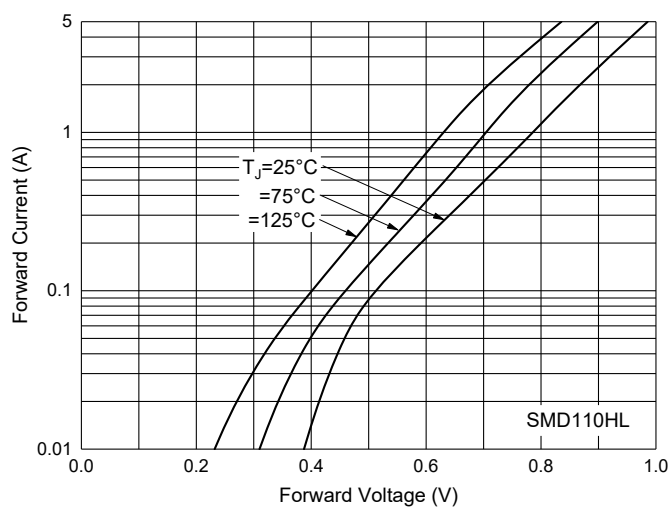


Fig. 8 - Typical Reverse Leakage Characteristics

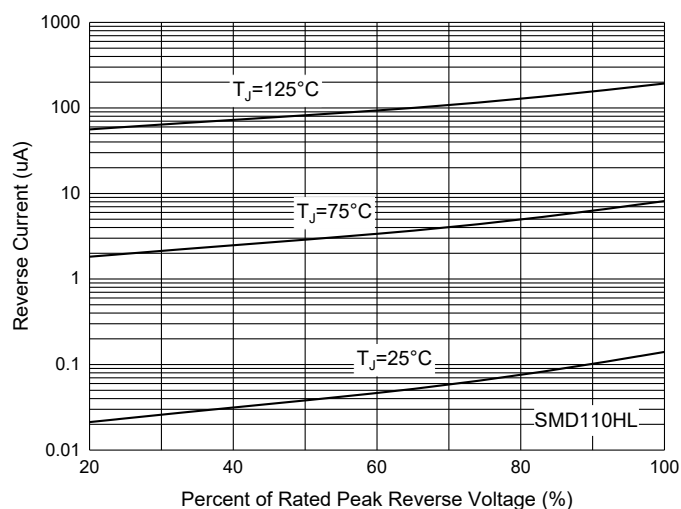


Fig. 9 - Typical Forward Characteristics

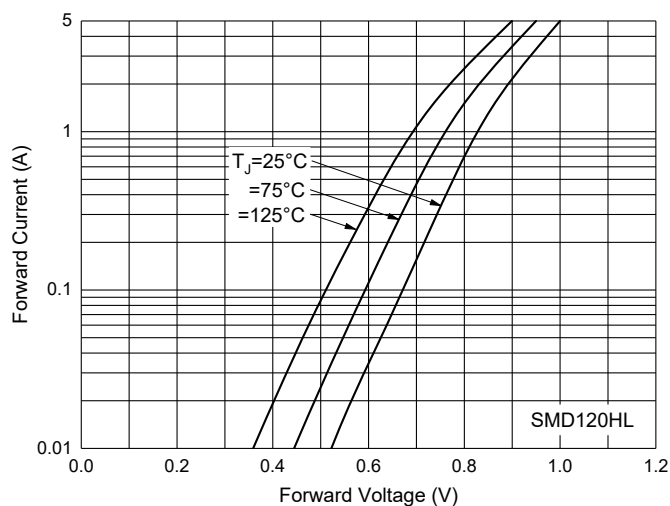


Fig. 10 - Typical Reverse Leakage Characteristics

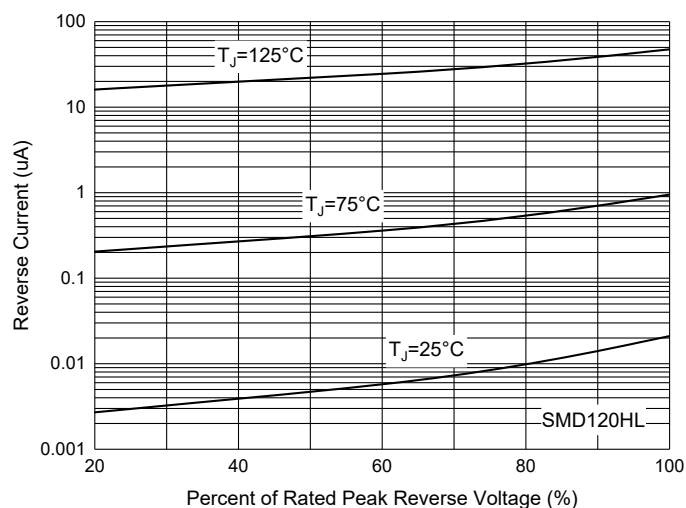


Fig. 11 - Typical Capacitance Characteristics

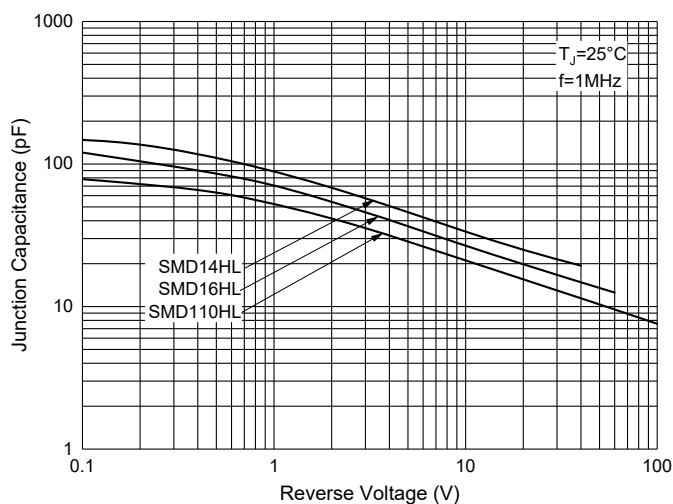
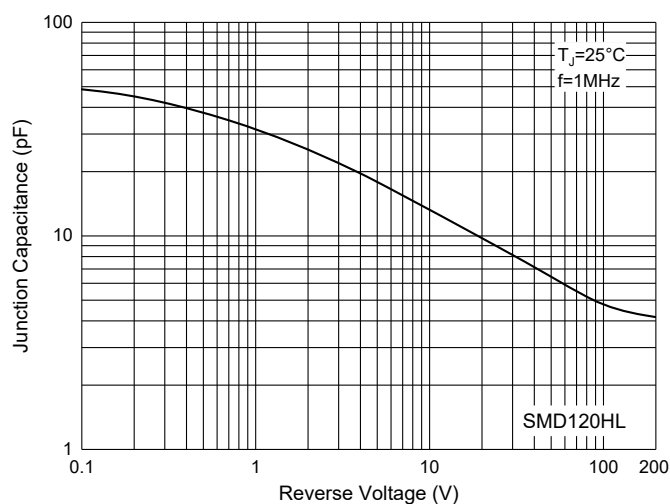


Fig. 12 - Typical Capacitance Characteristics



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:2.5Kpcs/Reel

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