

Features

- Halogen Free. "Green" Device (Note 1)
- Low Power Loss, High Efficiency
- High Surge Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant (Note 2)("P" Suffix Designates RoHS Compliant. See Ordering Information)
- Fully Automotive Qualified to AEC-Q101

Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value		Unit
		SMD14PBQ	SMD16PBQ	
Peak Repetitive Reverse Voltage	V_{RRM}	40	60	V
Working Peak Reverse Voltage	V_{RWM}			
DC Blocking Voltage	V_R			
RMS Reverse Voltage	V_{RMS}	28	42	V
Average Rectified Forward Current @ $T_L=130^\circ\text{C}$	$I_{F(AV)}$	1		A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	I_{FSM}	30		A
Current Squared Time @ $1\text{ms} \leq t \leq 8.3\text{ms}$	I^2t	3.735		A^2s

Marking Code

Part Number	Marking Code
SMD14PBQ	14
SMD16PBQ	16

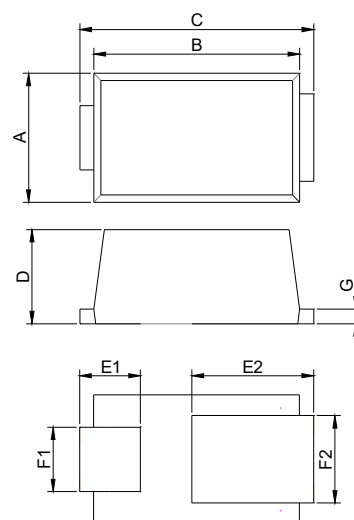
Internal Structure

Pin	Description	Simplified Outline	Graphic Symbol
1	Cathode	<p>YWW = Date Code XX = Marking Code</p>	
2	Anode		

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

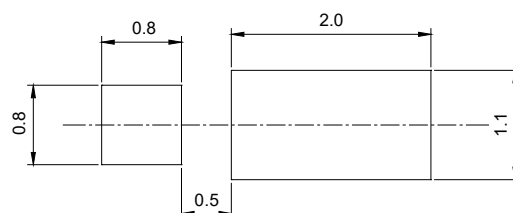
1 Amp Surface Mount Schottky Rectifier 40 to 60 Volts

SOD-323HE-B



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.047	0.055	1.20	1.40	
B	0.083	0.091	2.10	2.30	
C	0.091	0.106	2.30	2.70	
D	0.035	0.039	0.90	1.00	
E1	0.022	0.030	0.55	0.75	
E2	0.043	0.059	1.10	1.50	
F1	0.022	0.030	0.55	0.75	
F2	0.031	0.039	0.78	0.98	
G	0.005	0.011	0.12	0.27	

Suggested Solder Pad Layout(mm)



Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
T_J	Operating Junction Temperature Range		-55		150	°C
T_{stg}	Storage Temperature Range		-55		150	°C
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient	Note 1		130		°C/W
$R_{th(J-L)}$	Thermal Resistance from Junction to Lead	Note 1		30		°C/W

Note:

1. Thermal resistance between junction and ambient and between junction and lead mounted on P.C.B with 5mm*5mm copper pad areas. $R_{th(J-L)}$ is measured at the terminal of cathode band.

Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage						
SMD14PBQ	V_F	$I_F=1A; T_J=25^\circ C$ $I_F=1A; T_J=125^\circ C$		0.50	0.55 0.45	V
SMD16PBQ		$I_F=1A; T_J=25^\circ C$ $I_F=1A; T_J=125^\circ C$		0.60	0.70 0.55	
Reverse Current	I_R	at Rated $V_R; T_J=25^\circ C$ at Rated $V_R; T_J=125^\circ C$			0.05 10	mA
Junction Capacitance						
SMD14PBQ	C_J	$V_R=4V; f=1MHz; T_J=25^\circ C$		55		pF
SMD16PBQ				45		

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

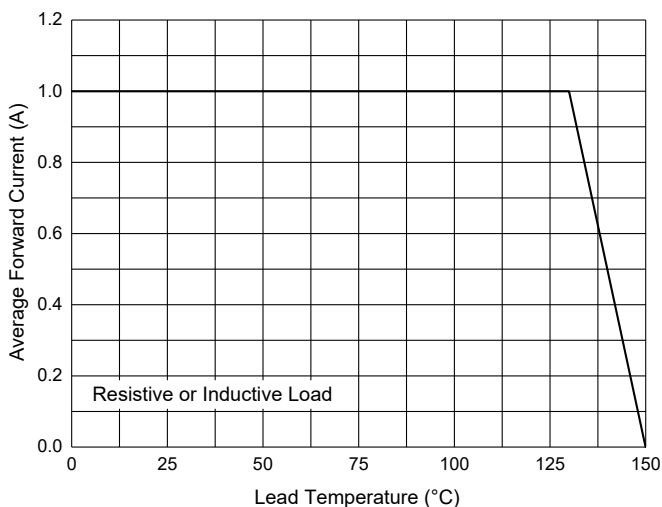


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

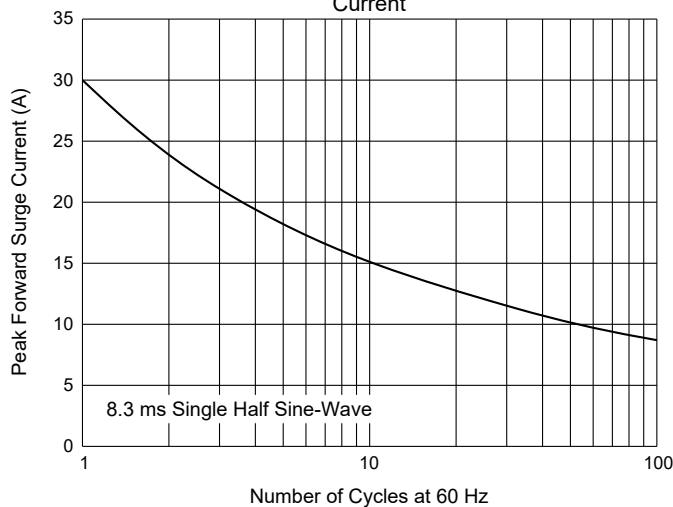


Fig. 3 - Typical Forward Characteristics

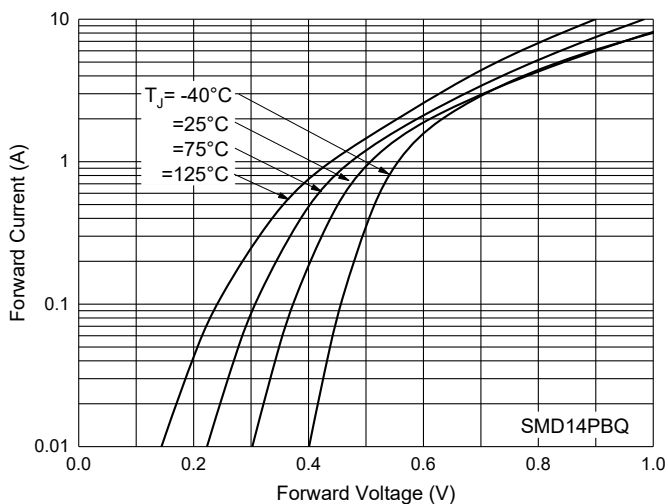


Fig. 4 - Typical Reverse Leakage Characteristics

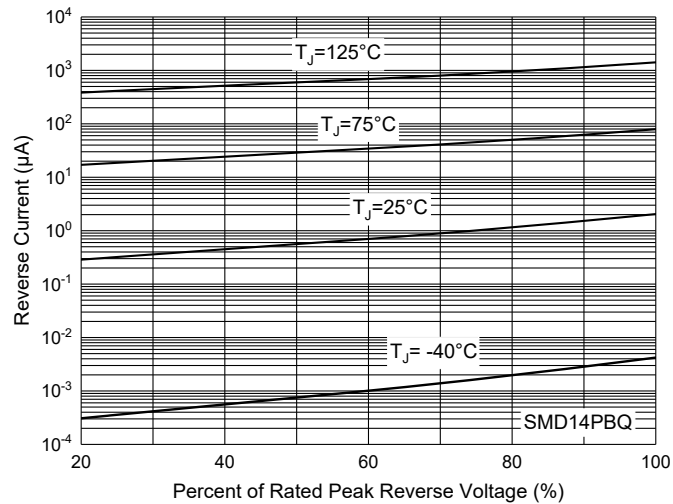


Fig. 5 - Typical Forward Characteristics

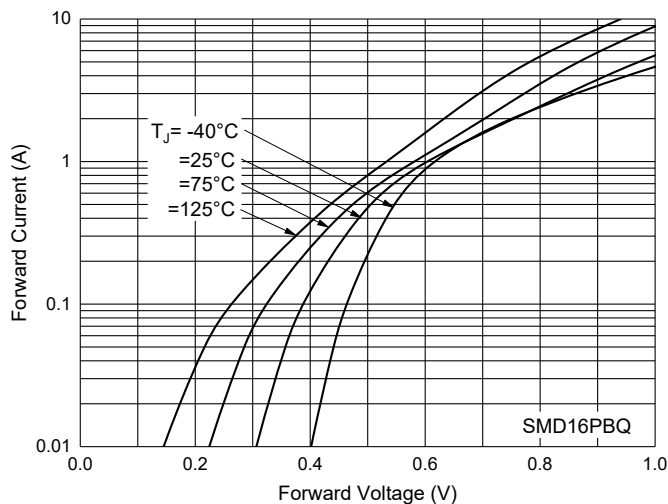
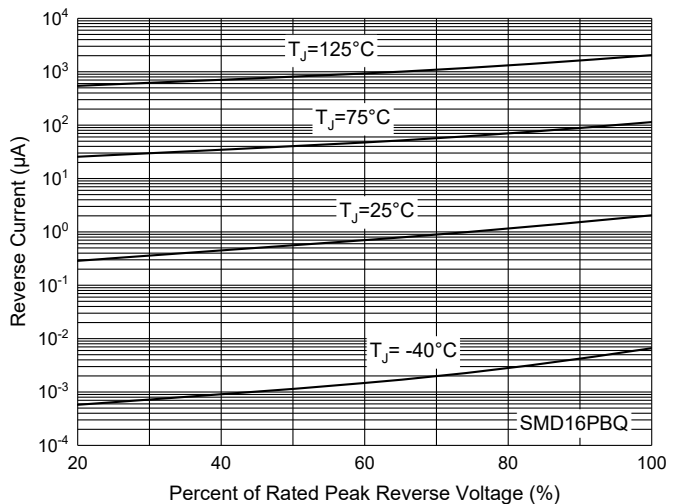
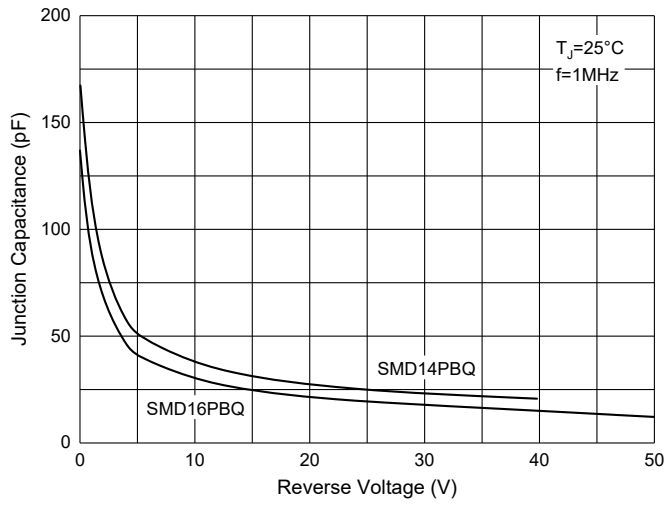


Fig. 6 - Typical Reverse Leakage Characteristics



Curve Characteristics

Fig. 7 - Typical Capacitance Characteristics



Ordering Information

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

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