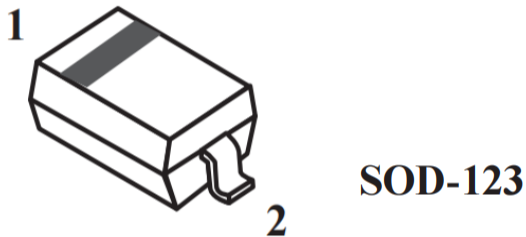


Features

- *Low Forward Voltage
- *Very Small Conduction Losses
- *Schottky Barrier Diodes Encapsulated in a SOD-123 Package

Description

These schottky barrier diodes are designed for high speed switching applications circuit protection, and voltage clamping, Extremely low forward voltage reduces conduction loss, Miniature surface mount package is excellent for hand held and portable applications where space is limited.



Maximum Ratings ($T_A=25^{\circ}\text{C}$ Unless otherwise noted)

Characteristic	Symbol	MBR0530	MBR0540	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	30	40	V
Average Rectified Output Current	$V_{R(RMS)}$	21	28	V
RMS Reverse Voltage	I_{FAV}	500		mA
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimpose on rated load (JEDEC Method)	I_{FSM}	5.5		A
Typical thermal Resistance junction to Ambient Note (1)	$R_{\theta JA}$	244		$^{\circ}\text{C/W}$
Operating & Storage Temperature Range	T_J T_{STG}	-55 to +125		$^{\circ}\text{C}$

Electrical Characteristics (T_A=25°C Unless otherwise noted)

Characteristic	Symbol	MBR0530	MBR0540	Unit
Minimum Reverse Breakdown Voltage ⁽²⁾ (I _R =130μA) (I _R =20μA)	V _{(BR)R}	30 -	- 40	V
Forward Voltage Note(2) I _F =0.1A T _j =25°C I _F =0.5A T _j =25°C I _F =1.0A T _j =25°C I _F =0.5A T _j =100°C I _F =1.0A T _j =100°C	V _F	0.375 0.430 . . .	. 0.510 0.620 0.460 0.610	V
Reverse Current Note(2) V _R =15V, T _j =25°C V _R =20V, T _j =25°C V _R =30V, T _j =25°C V _R =40V, T _j =25°C V _R =20V, T _j =100°C V _R =30V, T _j =100°C	I _R	20 . 130 . - - -	. 10 . 20 5.0 13	μA mA
Junction Capacitance f=1MHZ, V _R =0V DC	C _j	170		PF

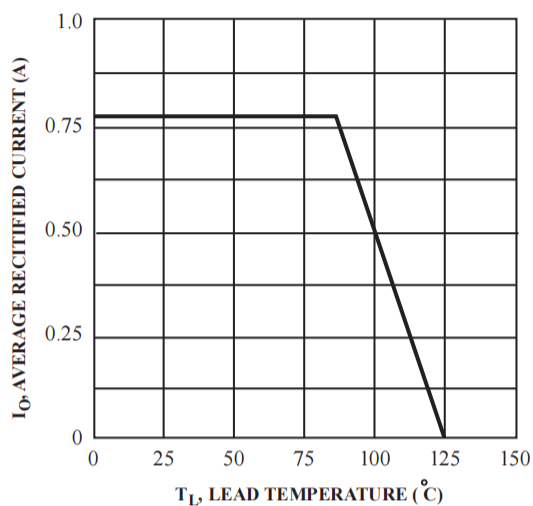


FIG. 1 Forward Current Derating Curve

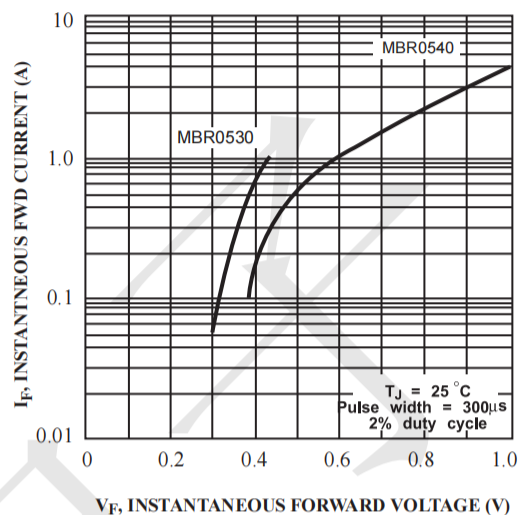


Fig. 2 Typical Forward Characteristics

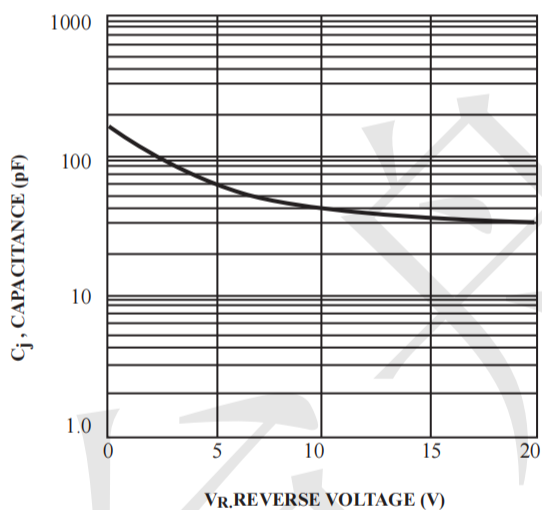
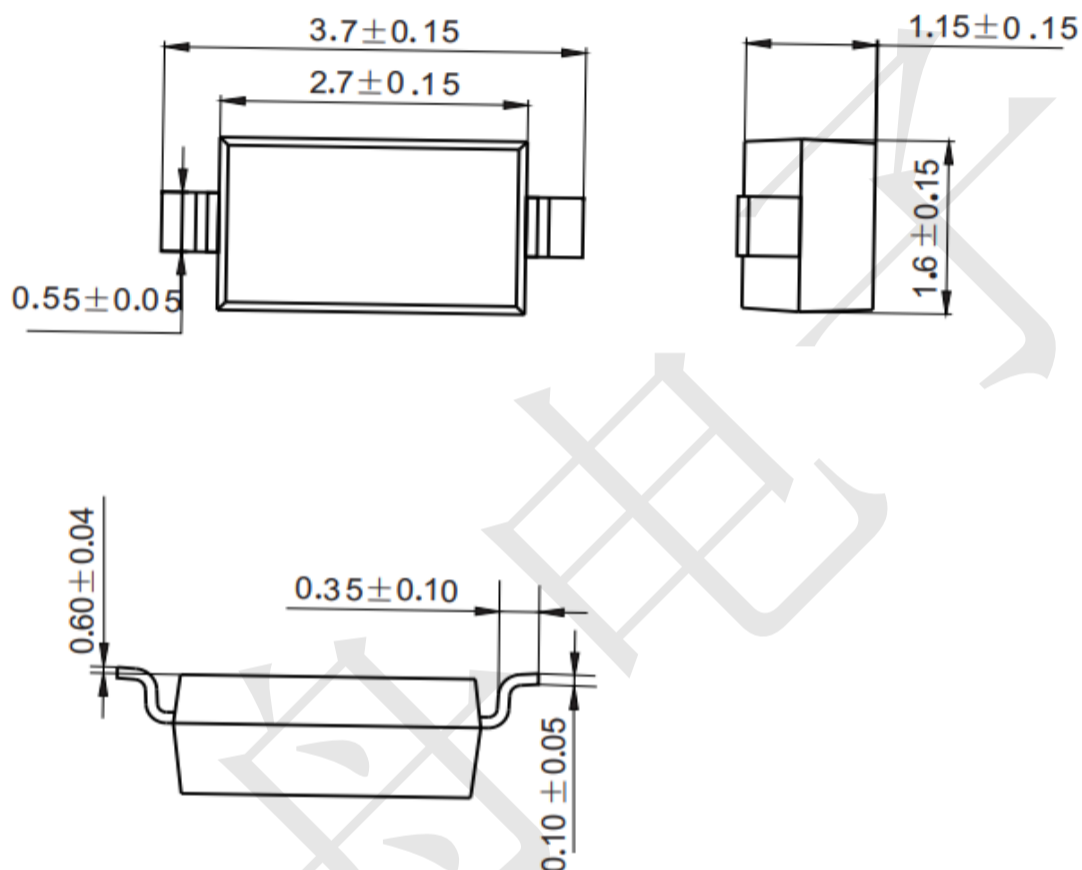


Fig. 3 Typ, Junction Capacitance vs. Reverse Voltage

Package information (Unit: mm)



Mounting Pad Layout (Unit: mm)

