

Features

- ▶ For use in low voltage, high frequency inverters
- ▶ Free wheeling, and polarity protection applications

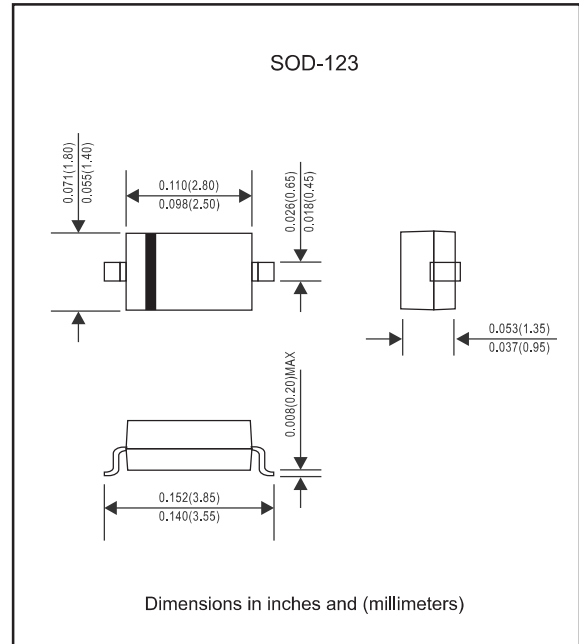
Mechanical data

- ▶ **Case:** JEDEC SOD-123 molded plastic body
- ▶ **Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026
- ▶ **Polarity:** Color band denotes cathode end
- ▶ **Mounting Position:** Any
- ▶ **Marking:**

MBR0520T1G: SD
 MBR0530T1G: SE
 MBR0540T1G: SF



Package outline

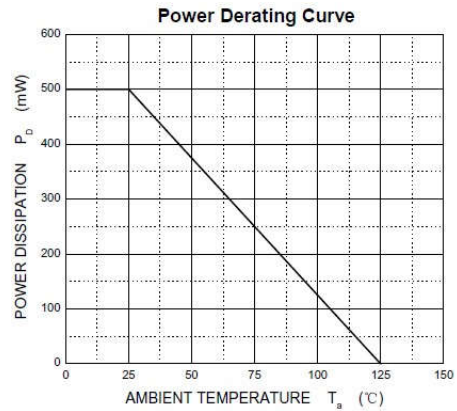
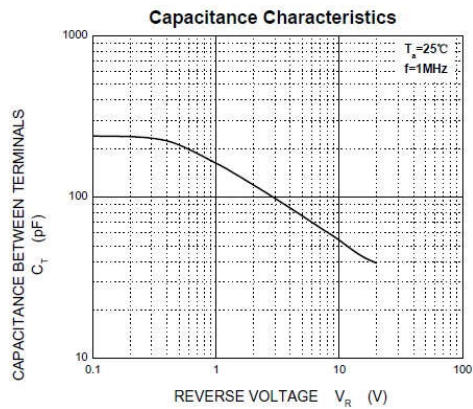
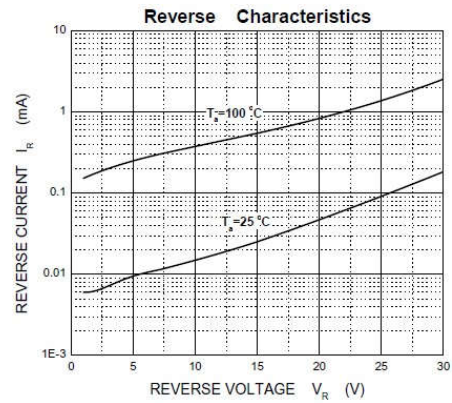
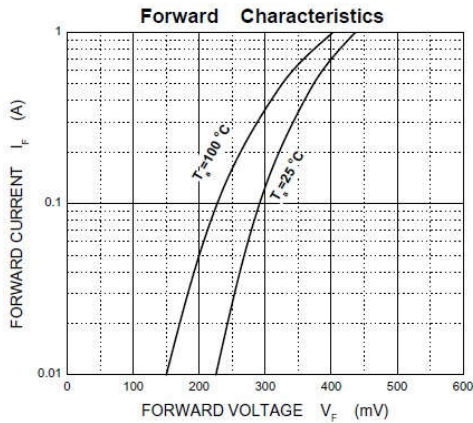


Maximum ratings and Electrical Characteristics (AT T_A=25°C unless otherwise noted)



PARAMETER	SYMBOLS	MBR0520T1G	MBR0530T1G	MBR0540T1G	UNITS
Peak repetitive peak reverse voltage	V _{RRM}				
Working peak DC Blocking voltage	V _{RWM} V _R	20	30	40	V
RMS Reverse voltage	V _{R(RMS)}	14	21	28	V
Average rectified output current	I _o		0.5		A
Peak forward surge current @=8.3ms	I _{FSM}		5.5		A
Power dissipation	P _d		500		mW
Thermal resistance junction to ambient	R _{θJA}		200		K/W
Operating junction temperature range	T _J		-55 to +125		°C
Storage temperature	T _{STG}		-55 to +150		
Non-Repetitive peak reverse voltage	V _{RM}	20	30	40	V

PARAMETER	SYMBOLS	Min.	Max.	Unit	Test conditions	
Reverse breakdown voltage	V _(BR)	20		V	I _R =250uA	MBR0520T1G
		30		V	I _R =200uA	MBR0530T1G
		40		V	I _R =20.0uA	MBR0540T1G
Reverse voltage leakage current	I _R		75	uA	V _R =10V	MBR0520T1G
			20	uA	V _R =15V	MBR0530T1G
			250	uA	V _R =20V	MBR0520T1G
			10	uA	V _R =20V	MBR0540T1G
			130	uA	V _R =30V	MBR0530T1G
			20	uA	V _R =40V	MBR0540T1G
Forward voltage	V _F		0.33	V	I _F =0.1A	MBR0520T1G
			0.385	V	I _F =0.5A	
			0.375	V	I _F =0.1A	MBR0530T1G
			0.43	V	I _F =0.5A	
Diode capacitance	C _D		0.51	V	I _F =0.5A	MBR0540T1G
			0.62	V	I _F =1.0A	
			170	pF	V _R =0V, f=1.0MHz	

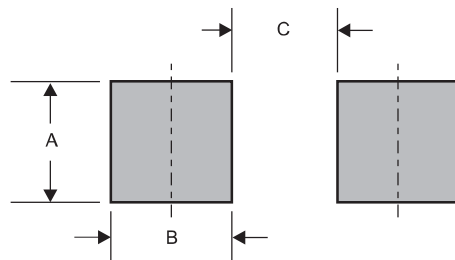
Rating and characteristic curves



Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-123	0.048 (1.22)	0.036 (0.91)	0.093 (2.36)

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