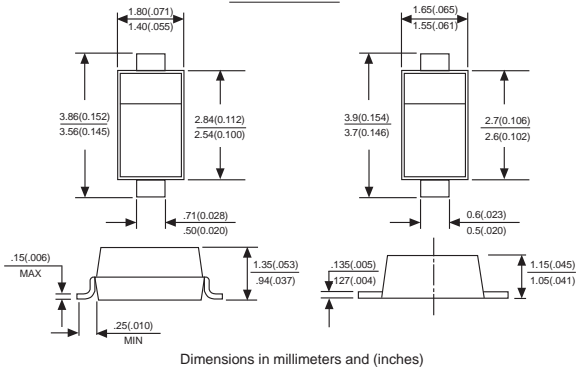




MBR0520 THRU MBR0540

SCHOTTKY DIODE

SOD-123



FEATURES

- Low forward voltage drop
- Guard ring construction for transient protection
- High conductance
- Also available in lead free version

MECHANICAL DATA

Case: Molded plastic body

Terminals: Plated leads solderable per MIL-STD-750, Method 2026

Polarity: Polarity symbols marked on case

Marking: MBR0520:R2, MBR0530:R3, MBR0540:R4

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Maximum ratings and electrical characteristics, Single diode @T_A=25°C

PARAMETER	SYMBOLS	MBR0520	MBR0530	MBR0540	UNITS
Peak repetitive peak reverse voltage	V _{RRM}				VOLTS
Working peak reverse voltage	V _{RWM}	20	30	40	
DC Blocking voltage	V _R				
RMS Reverse voltage	V _{R(RMS)}	14	21	28	V
Average rectified output current	I _o		500		mA
Peak forward surge current	I _{FSM}		5.5		A
Power dissipation	P _d		410		mW
Thermal resistance junction to ambient	R _{θJA}		244		°C/W
Storage temperature	T _{STG}		-65 to +150		°C
Voltage rate of change	dv/dt		1000		V/μS

Electrical ratings @T_A=25°C

PARAMETER	SYMBOLS	MBR0520	MBR0530	MBR0540	Unit	Conditions
Minimum reverse breakdown voltage	V _{BR}	20			V	I _R =250μA
			30		V	I _R =130μA
				40	V	I _R =20μA
Forward voltage	V _{F1}	0.34	0.375		V	I _F =0.1A
	V _{F2}	0.43	0.430	0.510	V	I _F =0.5A
	V _{F3}			0.62	V	I _F =1.0A
Reverse current	I _{R1}	75			μA	V _R =10V
	I _{R2}		20		μA	V _R =15V
	I _{R3}	250		10	μA	V _R =20V
	I _{R4}		130		μA	V _R =30V
	I _{R5}			20	μA	V _R =40V
Capacitance between terminals	C _T			170	pF	V _R =1V, f=1.0MHz
Reverse recovery time	t _{rr}			4	ns	I _F =I _R =10mA I _{rr} =0.1I _R , R _L =100Ω

RATINGS AND CHARACTERISTIC CURVES MBR0520 THRU MBR0540

FIG. 1- FORWARD CURRENT DERATING CVRVE

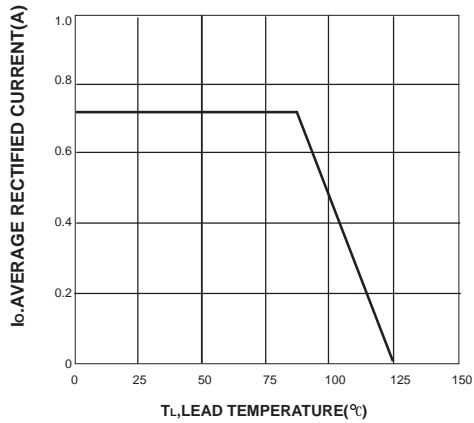


FIG. 2-TYPICAL FORWARD CHARACTERISTIC

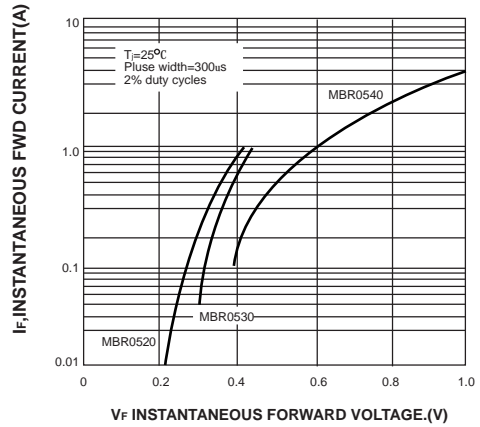


FIG. 3-TYP. JUNCTION CAPACITANCE VS REVERSE VOLTAGE

