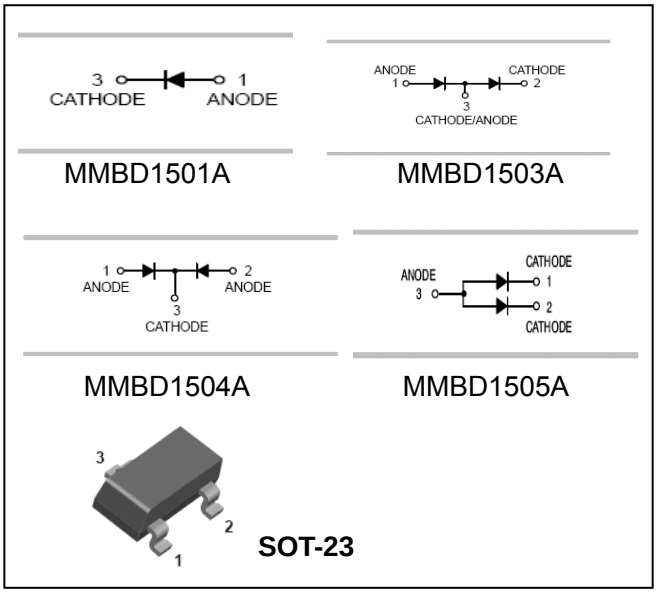
High conductance low leakage diode

MMBD1501A/1503A/ 1504A/1505A

FEATURES

Lead-free

- Two element incorporated into one package.
  (Emitter-coupled transistors)
- Reduction of the mounting area and assembly cost by one half.



APPLICATIONS

- For general application.

ORDERING INFORMATION

Type No.	Marking	Package Code
MMBD1501A	A11	SOT-23
MMBD1503A	A13	SOT-23
MMBD1504A	A14	SOT-23
MMBD1505A	A15	SOT-23

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Parameter	**Symbol**	**Limits**	**Unit**
Reverse Voltage	V_R	200	V
Average rectified current	$V_{F(AV)}$	200	mA
Forward Continuous Current	I_{FM}	600	mA
Peak forward current (1.0s) (1.0m)	I_{FSM}	1.0 2.0	A
Power Dissipation	P_d	350	mW
Thermal resistance,Junction to ambient	$R_{\theta JA}$	357	℃/W
Storage temperature	T_{STG}	-55-150	℃

High conductance low leakage diode

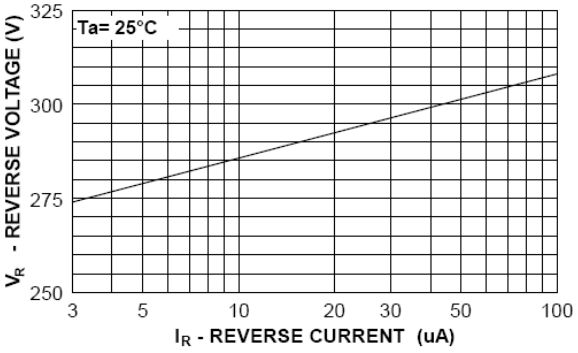
MMBD1501A/1503A/ 1504A/1505A

ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

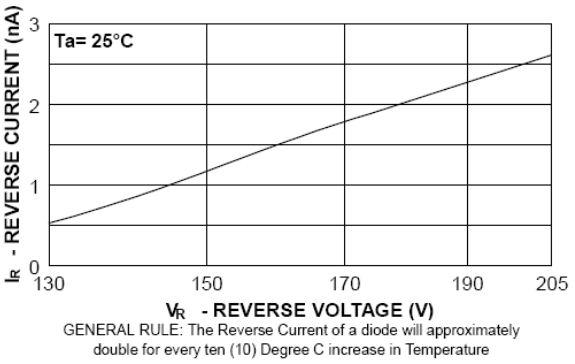
Parameter	Symbol	Min.	Max.	Unit	Test Conditions
Reverse Breakdown Voltage	$V_{(BR)R1}$	200		V	I_R=5μA
Forward voltage	V_F	0.62	0.72	V	I_F=1mA
		0.72	0.83		I_F=10mA
		0.8	0.89		I_F=50mA
		0.83	0.93		I_F=100mA
		0.87	1.1		I_F=200mA
		0.9	1.15		I_F=300mA
Reverse current	I_R		1.0	nA	V_R=125V
			10		V_R=180V
Diode Capacitance	C_D		4	pF	V_R=0V,f=1MHz

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

REVERSE VOLTAGE vs REVERSE CURRENT
BV - 3.0 to 100 uA

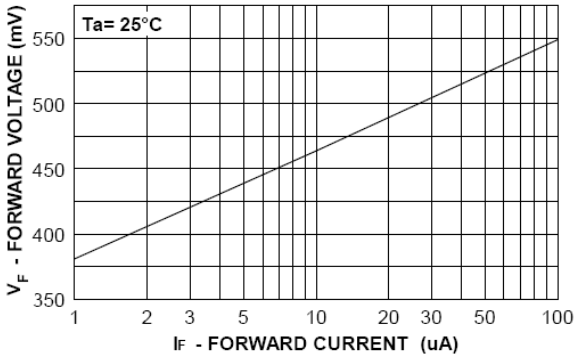


REVERSE CURRENT vs REVERSE VOLTAGE
IR - 130 - 205 Volts

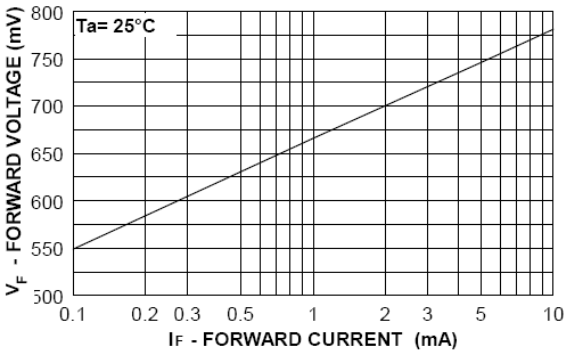


GENERAL RULE: The Reverse Current of a diode will approximately double for every ten (10) Degree C increase in Temperature

FORWARD VOLTAGE vs FORWARD CURRENT
VF - 1 to 100 uA



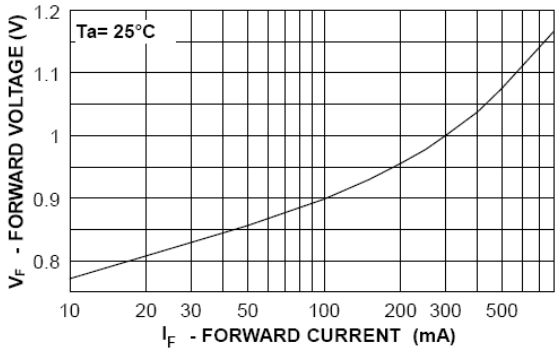
FORWARD VOLTAGE vs FORWARD CURRENT
VF - 0.1 to 10 mA



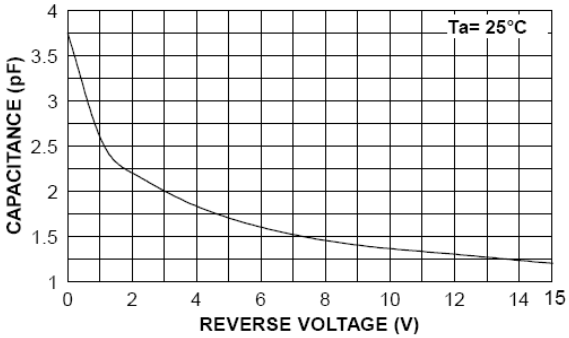
High conductance low leakage diode

MMBD1501A/1503A/ 1504A/1505A

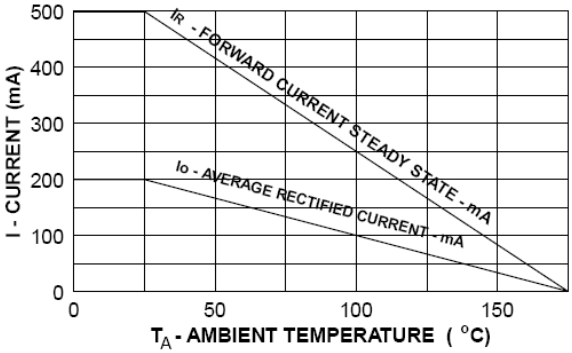
FORWARD VOLTAGE vs FORWARD CURRENT
VF - 10 to 800 mA



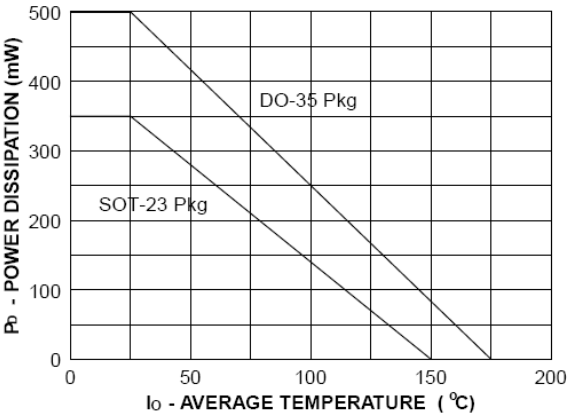
CAPACITANCE vs REVERSE VOLTAGE
VR - 0 to 15 V



Average Rectified Current (Io) & Forward Current (I_F) versus Ambient Temperature (T_A)



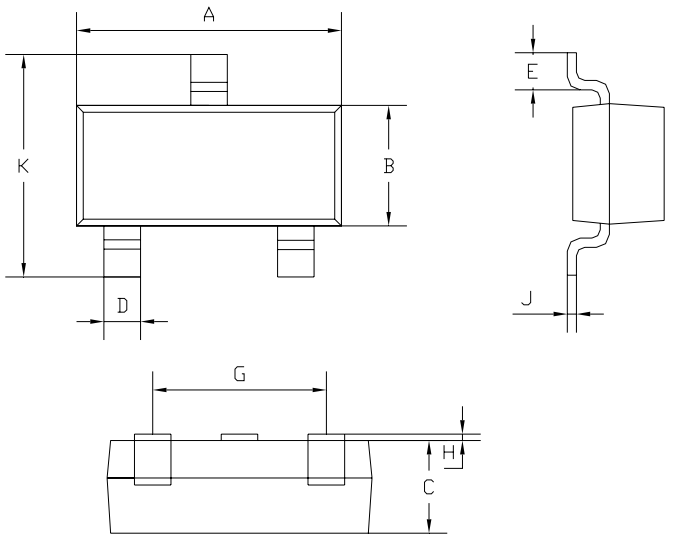
POWER DERATING CURVE



High conductance low leakage diode **MMBD1501A/1503A/ 1504A/1505A**

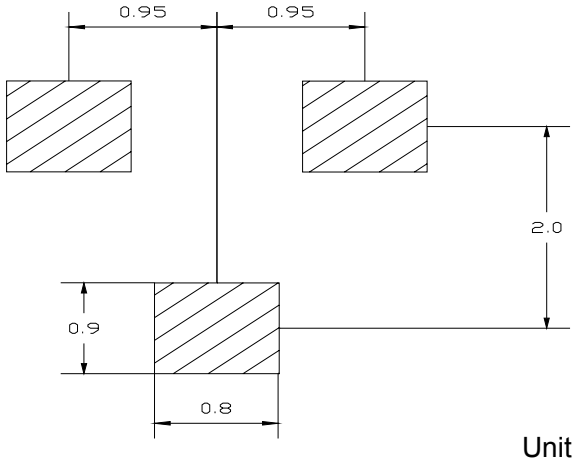
PACKAGE OUTLINE

Plastic surface mounted package SOT-23



SOT-23		
Dim	Min	Max
A	2.85	2.95
B	1.25	1.35
C	1.0Typical	
D	0.37	0.43
E	0.35	0.48
G	1.85	1.95
H	0.02	0.1
J	0.1Typical	
K	2.35	2.45
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

Device	Package	Shipping
MMBD1501A/1503A/1504A/1505A	SOT-23	3000/Tape&Reel