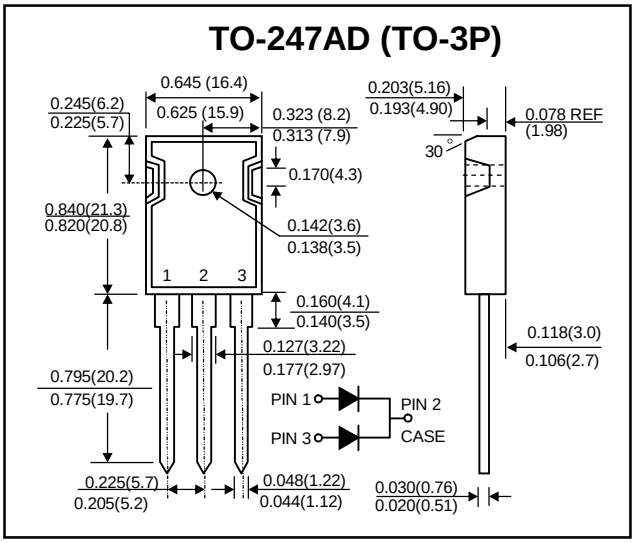
Certificate Number: Q10561

Certificate Number: E17276

MBR4050PT SERIES

SCHOTTKY BARRIER RECTIFIER DIODE

PRV : 50~80 Volts
Io : 40 Amperes



FEATURES :

* High current capability
* Low power loss, high efficiency
* High surge capacity
* Pb / RoHS Free

MECHANICAL DATA :

* Case : TO-247AD Molded plastic
* Polarity : As marked on the body
* Mounting position : Any
* Weight : 5.6 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.
Resistive or inductive load
For capacitive load, derate current by 20%.

RATINGS	SYMBOL	MBR4050PT	MBT4060PT	MBT4080PT	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	60	80	V
Maximum Working Peak Reverse Voltage	V_{RWM}	50	60	80	V
Maximum DC Blocking Voltage	V_{DC}	50	60	80	V
Maximum Average Forward Rectified Current at T_C=120 °C	$I_{(AV)}$	40			A
Peak Forward Surg Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	400			A
Maximum Instantaneous Forward Voltage per leg IF=20 A, T_C = 25 °C (Note 2)	V_F	0.8			V
IF=20 A, T_C = 125 °C		0.7			
Maximum Average Reverse Current at T_C = 25 °C	I_R	10			mA
Rate Peak Reverse Voltage (Note3) T_C = 100 °C		100			
Typical Thermal Resistance (Note 1)	$R_{\theta JC}$	1.4			°C/W
Maximum Operation Temperature Range	T_C	-65 to + 150			°C
Maximum Storage Temperature Range	T_{STG}	-65 to + 150			°C

Notes :

(1) Thermal Resistance from Junction to Case.
(2) 300 µs Pulse Width , 2% Duty Factor.
(3) 2.0 µs Pulse Width, f = 1.0 KHz

RATING AND CHARACTERISTIC CURVES (MBR4050PT ~ 80PT)

FIG.1 - FORWARD CURRENT DERATING CURVE

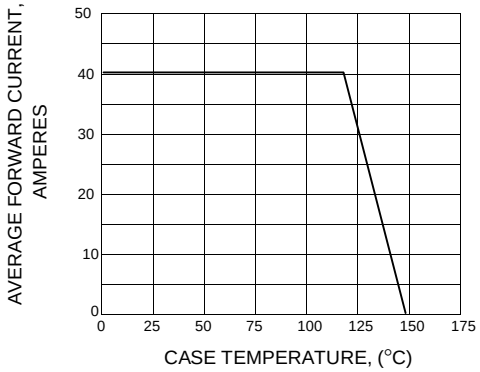


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

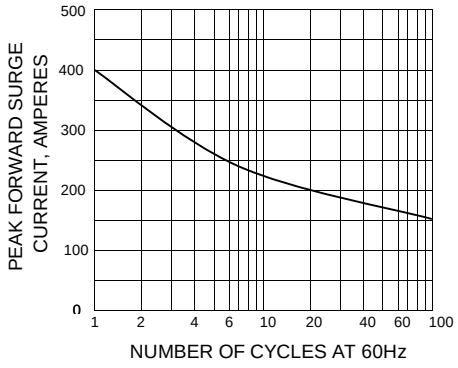


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

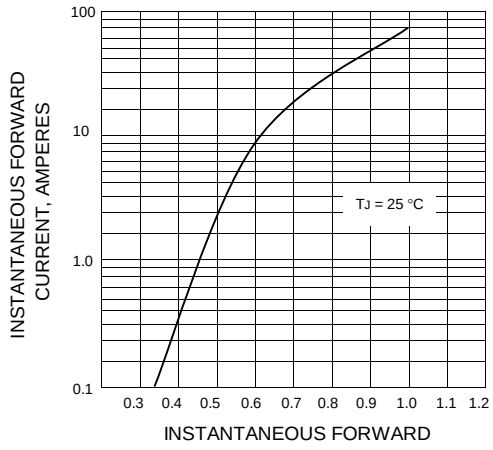


FIG.4 - MAXIMUM REVERSE CHARACTERISTICS PER LEG

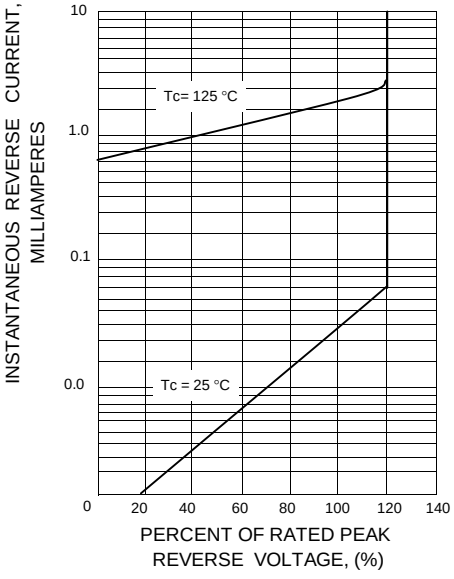


FIG.5 - TYPICAL JUNCTION CAPACITANCE PER ELEMENT