

Technical Data  
Data Sheet 2664, Rev.-

**MUR3080, MUR30100**  
**ULTRAFAST PLASTIC RECTIFIERS**

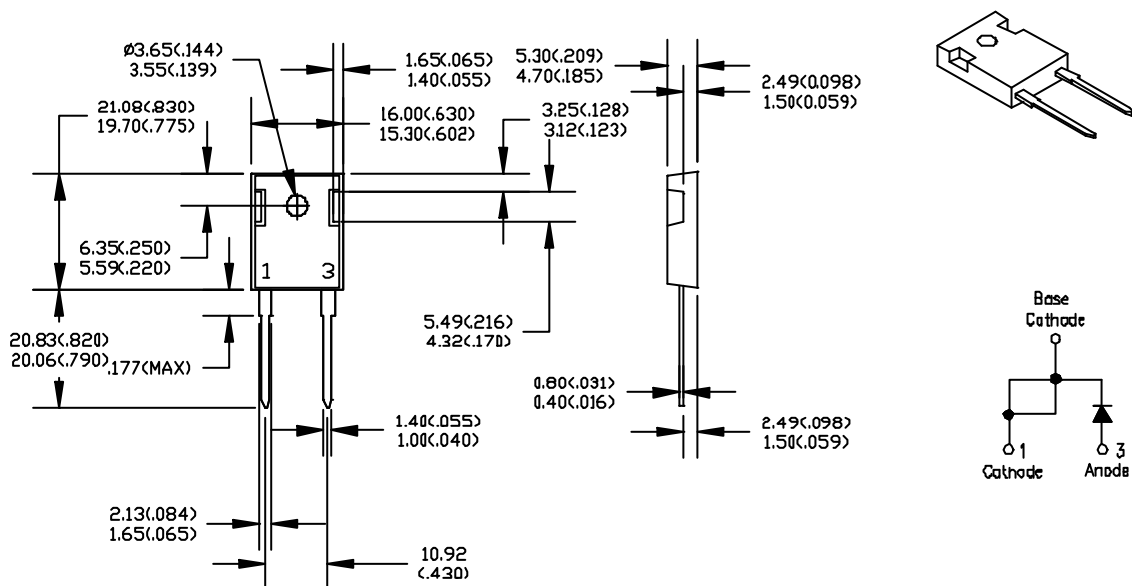
**Features:**

- 150 °C T<sub>J</sub> operation
- TO-247AC package
- Planar Passivated Chips
- High Voltage Capability to 1000 Volts
- Very Short Recovery Time
- Low Forward Voltage Drop

**Mechanical Data:**

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Weight: 4.3 grams (approx.)
- Marking: Type Number
- Mounting Position: Any

Mechanical Dimensions: In Inches / mm



**TO-247AC**

Data Sheet 2664, Rev. –

**Maximum Ratings and Electrical Characteristics** @ $T_A=25^\circ\text{C}$  unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

Characteristic	Symbol	MUR3080	MUR30100	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	VRRM VRWM VR	800	1000	V
RMS Reverse Voltage	VR(RMS)	880	1100	V
Average Rectified Output Current @ $T_C = 100^\circ\text{C}$	IO	30		A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	@ $T_C = 45^\circ\text{C}$	210	A
		@ $T_C = 150^\circ\text{C}$	195	
Forward Voltage @ $I_F = 30\text{A}$ , @ $T_C = 150^\circ\text{C}$ @ $I_F = 30\text{A}$ , @ $T_C = 25^\circ\text{C}$	VFM	2		V
		2.4		
Peak Reverse Current At Rated DC Blocking Voltage $V_R = 540\text{V}$ , $T_C = 100^\circ\text{C}$ , $-di/dt = 240\text{A}/\mu\text{S}$ , $I_F = 30\text{A}$	IRM	18		A
Reverse Recovery Time (Note 1)	trr	50		nS
Operating and Storage Temperature Range	Tj, TSTG	-40 to +150		$^\circ\text{C}$
Thermal Resistance, Junction to Case	R <sub>θJC</sub>	1.0		$^\circ\text{C}/\text{W}$

Note: 1. Measured with  $V_R = 30\text{V}$ ,  $T_C = 25^\circ\text{C}$ ,  $-di/dt = 100\text{A}/\mu\text{S}$ ,  $I_F = 1\text{A}$

Data Sheet 2664, Rev. -

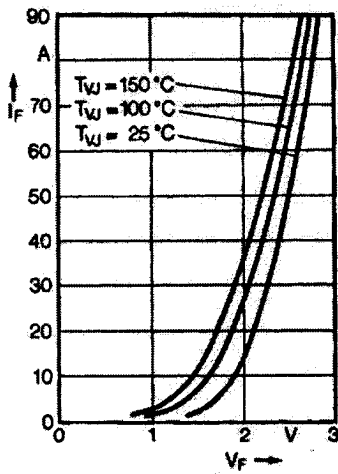


Fig. 1 Forward current versus voltage drop.

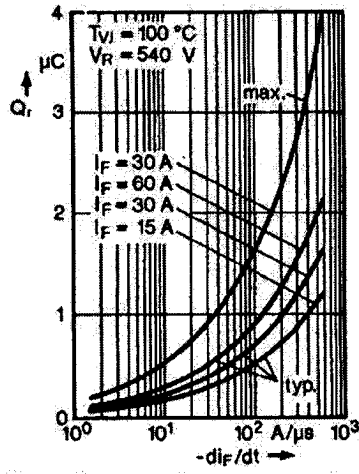


Fig. 2 Recovery charge versus  $-di_F/dt$ .

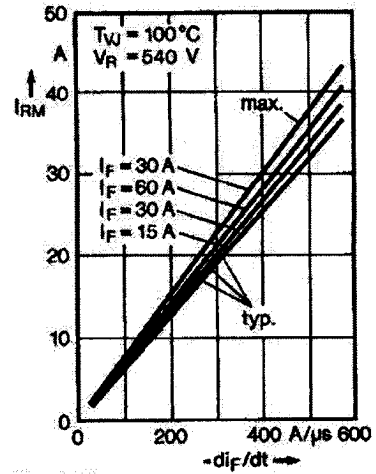


Fig. 3 Peak reverse current versus  $-di_F/dt$ .

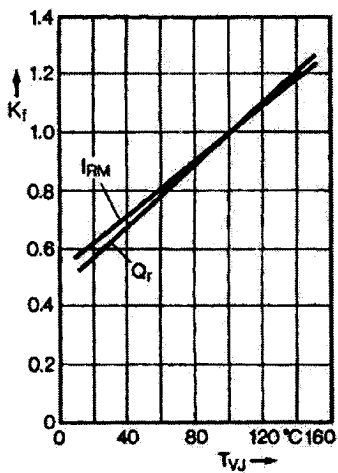


Fig. 4 Dynamic parameters versus junction temperature.

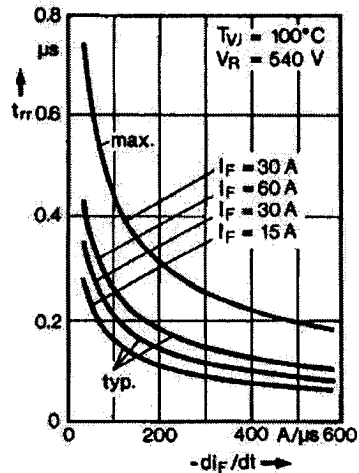


Fig. 5 Recovery time versus  $-di_F/dt$ .

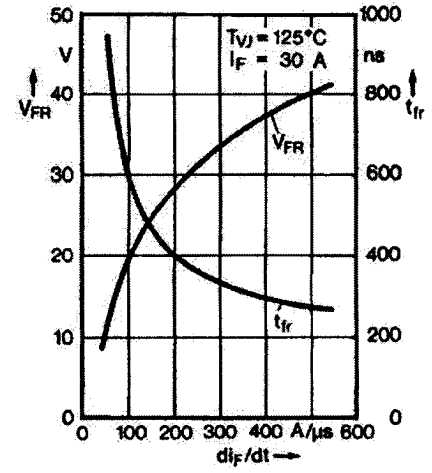


Fig. 6 Peak forward voltage versus  $di_F/dt$ .

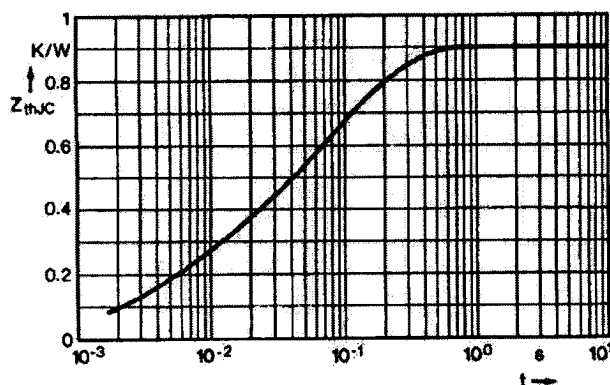


Fig. 7 Transient thermal impedance junction to case.