



# MUR20series

## Super Fast Rectifiers

### Features

- EPI wafer
- Low VF and soft recovery characteristic
- Low power loss
- Low leakage current
- For PFC(DCM/CCM) operation
- Lead free in compliance with EU RoHS 2011/65/EU directive

### Mechanical Data

- Circuit figure: Single positive
- Leads: Solderable per mil-std-202, Method 208
- Polarity: as marked
- Mounting torque: 5 in-lbs maximum
- Terminals: Puretin plated
- Weight: TO-220AC 1.85 grams  
ITO-220AC 1.60 grams  
TO-262AC 1.40 grams  
TO-263(D<sup>2</sup>PAK) 1.35 grams

### MAXIMUM RATINGS(TA=25°C)

RATINGS	SYMBOL	MU2060	MUR2060F	MUR2060W	MUR2060D	UNIT
Maximum repetitive reverse voltage	VRRM	600				V
Maximum RMS voltage	VRMS	420				V
Maximum DC blocking voltage	VDC	600				V
Maximum average forward current	I <sub>AV</sub>	20				A
Peak forward surge current,8.3ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	200				A
Typical thermal resistance per diode(Note 1)	R <sub>θ-JC</sub>	2.0	4.5	2.5	2.5	°C/W
Operating junction temperature range	T <sub>J</sub>	-55 to +150				°C
Storage temperature range	T <sub>STG</sub>	-55 to +150				°C

Notes: 1. Thermal resistance from junction to case.

### ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Instantaneous forward voltage	V <sub>F</sub>	I <sub>F</sub> = 20A T <sub>J</sub> =25°C	-	1.8	2.1	V
		I <sub>F</sub> = 20A T <sub>J</sub> =125°C	-	-	1.7	V
Reverse current per diode	I <sub>R</sub>	V <sub>R</sub> =600V T <sub>J</sub> =25°C T <sub>J</sub> =125°C	- -	- -	5 500	μA
Reverse recovery time	T <sub>RR</sub>	I <sub>F</sub> = 0.5A I <sub>R</sub> =1.0A I <sub>RR</sub> =0.25A T <sub>J</sub> =25°C	-	34	48	ns
		I <sub>F</sub> =1A V <sub>R</sub> =30V di/dt=200A/μS T <sub>J</sub> =25°C	-	32	-	

# Rating and Characteristic Curves ( $T_A = 25^{\circ}\text{C}$ Unless otherwise noted )

## MUR20 series

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

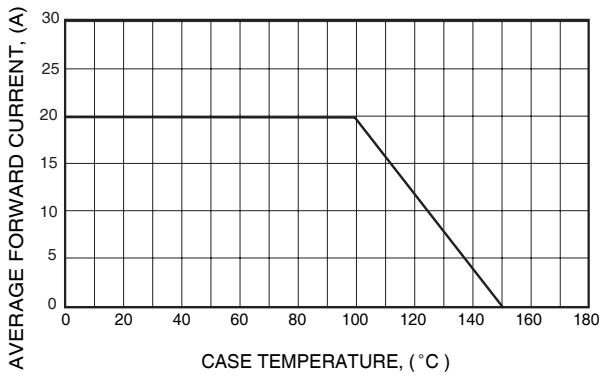


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

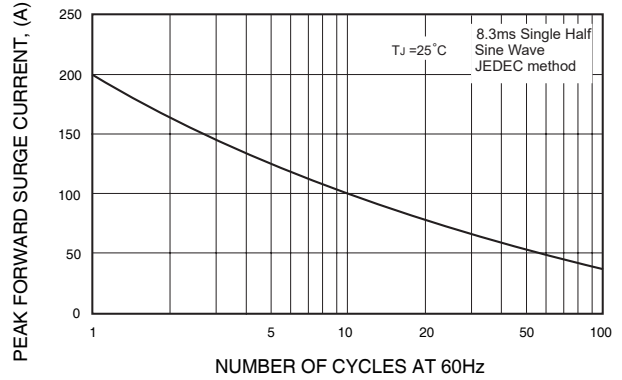


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

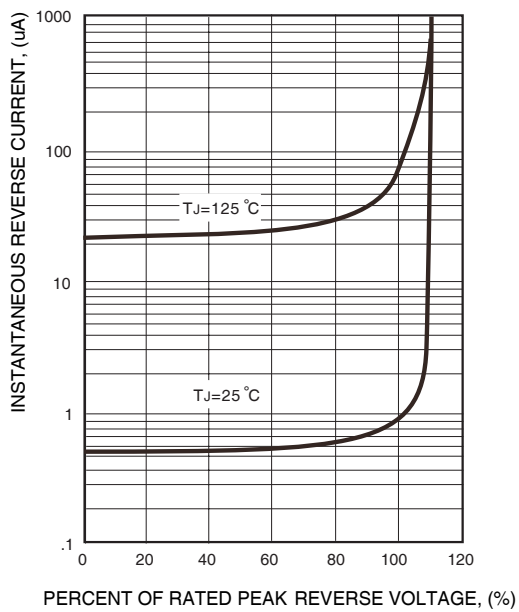
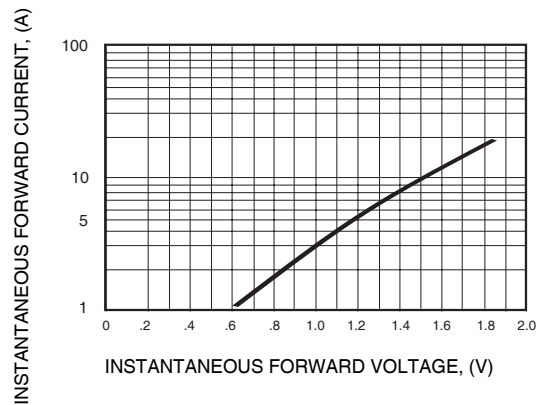
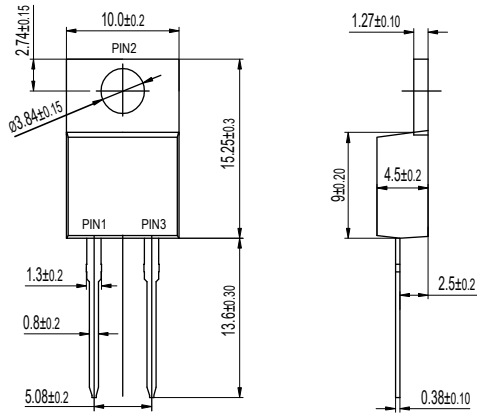


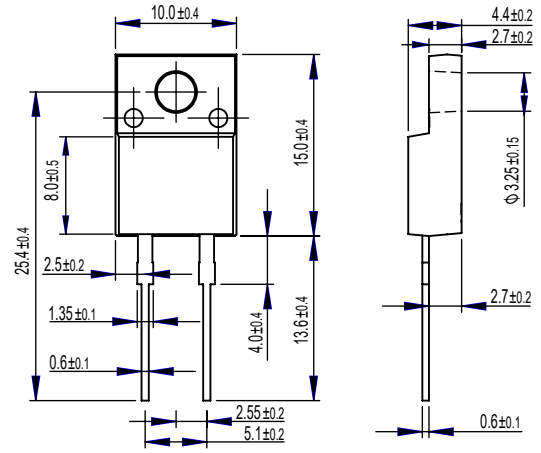
FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



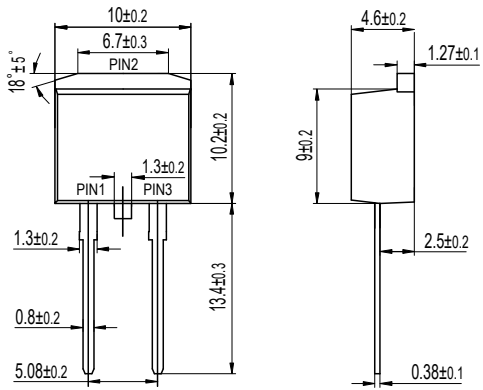
## Package outline



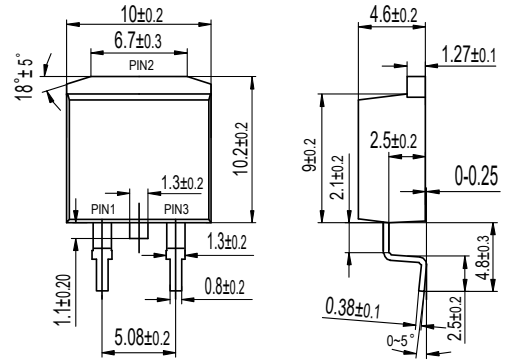
TO-220AC  
MUR2060



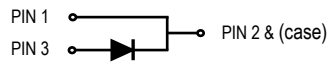
ITO-220AC  
MUR2060F



TO-262AC  
MUR2060W



TO-263(D<sup>2</sup>PAK)  
MUR2060D



Dimensions in millimeters