

**20Amp. Ultrafast Plastic Rectifiers**

# MUR2060FP

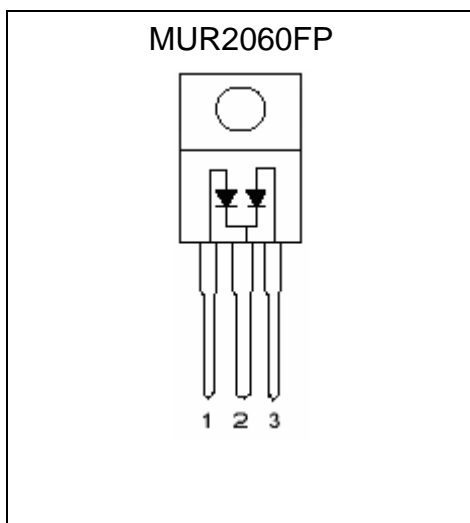
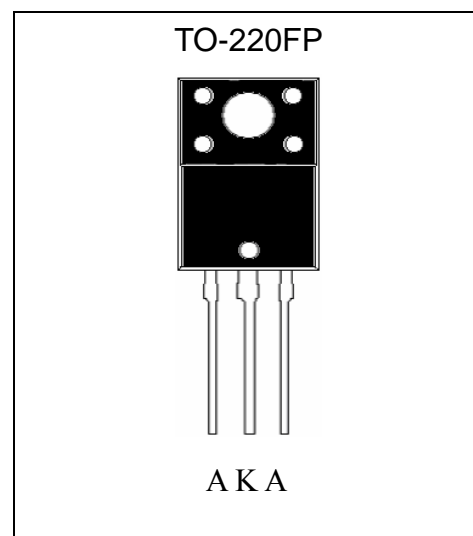
$I_{F(AV)}$	$2 \times 10A$
$V_{RRM}$	600V
$I_{FSM}$	120A
trr	60ns
$T_j$	175°C
$V_{F(MAX)}$	1.5V

**Features**

- 175°C operating junction temperature
- Low leakage current
- Low switching loss, high efficiency
- High forward surge capability
- Insulating package, insulating voltage=2500V AC
- High temperature soldering guaranteed : 260°C/40s, 0.25”(6.35mm) from case
- Pb-free lead plating package

**Mechanical Data**

- Case: TO-220FP molded plastic
- Mounting Position: Any
- Weight: 2.2 grams, 0.078 ounce approximately
- Terminals: Pure tin plated, solderable per MIL-STD-750 method 2026
- Epoxy: UL 94V-0 rate flame retardant
- Mounting torque: 5 in.-lb. maximum

**Equivalent Circuit**

**Outline**


**Maximum Ratings and Electrical Characteristics (Per Diode Leg)**

(Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.)

Parameter	Symbol	Min.	Typ.	Max.	Units
Maximum Recurrent peak reverse voltage	V <sub>RRM</sub>			600	V
Maximum RMS voltage	V <sub>RMS</sub>			420	V
Maximum DC blocking voltage	V <sub>DC</sub>			600	V
Maximum instantaneous forward voltage	I <sub>F</sub> =10A, T <sub>C</sub> =25°C	V <sub>F</sub>	1.25	1.5	V
	I <sub>F</sub> =10A, T <sub>C</sub> =150°C		1.06	1.3	
	I <sub>F</sub> =20A, T <sub>C</sub> =25°C		1.42	1.8	
	I <sub>F</sub> =20A, T <sub>C</sub> =150°C		1.29	1.6	
Maximum Average forward rectified current @ T <sub>C</sub> =100°C	Per Diode	I <sub>F(AV)</sub>		10	A
	Per Device			20	
Non-repetitive peak forward surge current @ 8.3ms single half sine wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>			120	A
Maximum instantaneous reverse current at	V <sub>R</sub> =600 V, T <sub>C</sub> =25°C	I <sub>R</sub>		10	μA
	V <sub>R</sub> =600 V, T <sub>C</sub> =125°C			100	
Maximum reverse recovery time	I <sub>F</sub> =1A, V <sub>R</sub> =30V, dI <sub>F</sub> /dt=100A/μs	t <sub>rr</sub>		60	ns
Typical junction capacitance @ f=1MHz and applied 4V reverse voltage	C <sub>J</sub>		80		pF
Isolation voltage from terminal to heatsink, t=1minute	V <sub>AC</sub>	2500			V
Storage temperature range	T <sub>stg</sub>	-65		+175	°C
Operating junction temperature range	T <sub>J</sub>	-65		+175	°C

**Thermal Data**

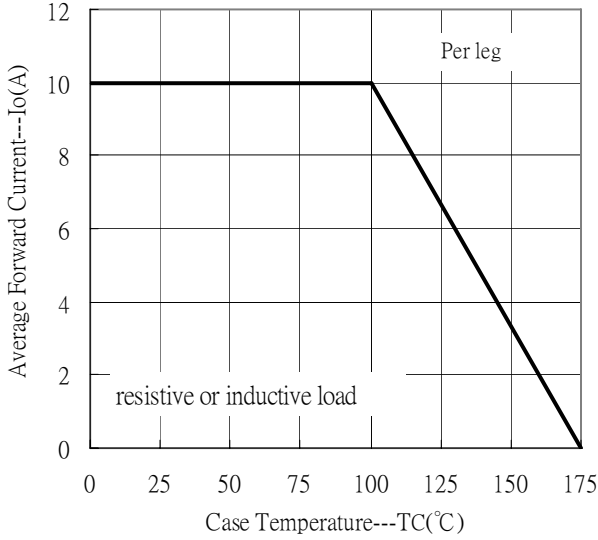
Parameter	Symbol	Value	Unit
Maximum Thermal Resistance, Junction-to-case	R <sub>th,j-c</sub>	4	°C/W
Maximum Thermal Resistance, Junction-to-ambient	R <sub>th,j-a</sub>	60	°C/W
Lead Temperature for Soldering Purposes : 1/8" from Case for 5 seconds	T <sub>L</sub>	300	°C

**Ordering Information**

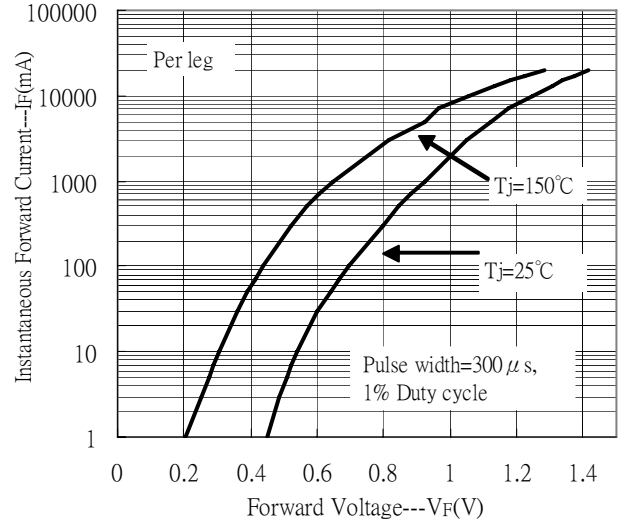
Device	Package	Shipping
MUR2060FP	TO-220FP (RoHS compliant package)	50 pcs / Tube, 40 Tubes/Box

**Typical Characteristics**

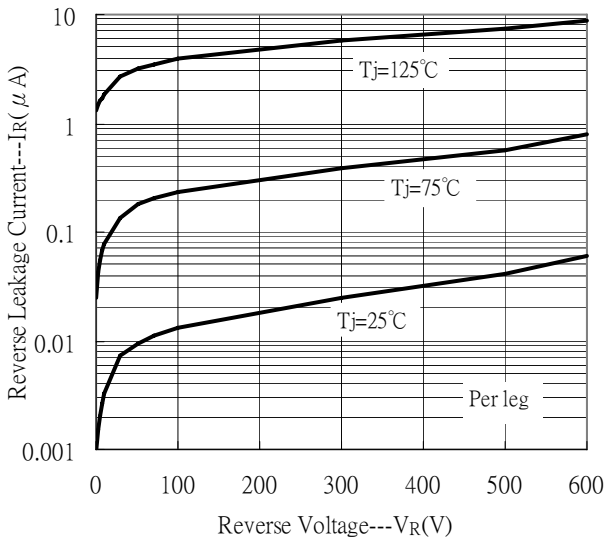
Forward Current Derating Curve



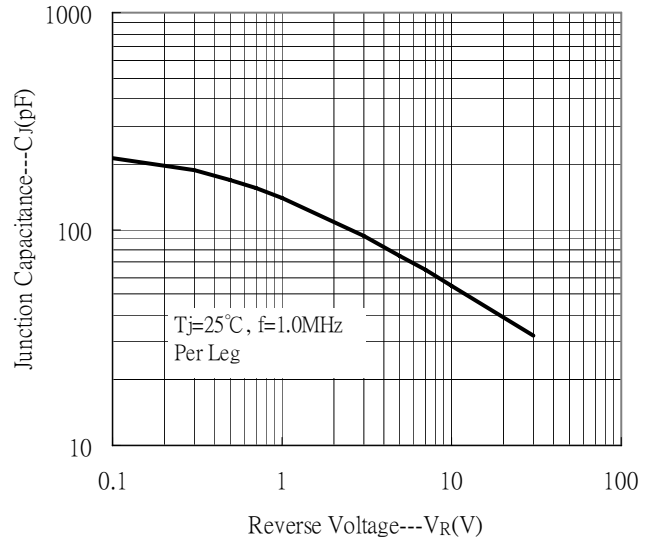
Forward Current vs Forward Voltage



Reverse Leakage Current vs Reverse Voltage



Junction Capacitance vs Reverse Voltage



## TO-220FP Dimension

3-Lead TO-220FP Plastic Package  
 CYStek Package Code: FP

Marking:  
 Device Name → MUR  
 Date Code → 2060

Style: Pin 1.Anode 2.Cathode 3.Anode

\*Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.171	0.183	4.35	4.65	G	0.246	0.258	6.25	6.55
A1	0.051 REF		1.300 REF		H	0.138 REF		3.50	REF
A2	0.112	0.124	2.85	3.15	H1	0.055 REF		1.40	REF
A3	0.102	0.110	2.60	2.80	H2	0.256	0.272	6.50	6.90
b	0.020	0.030	0.50	0.75	J	0.031 REF		0.80	REF
b1	0.031	0.041	0.80	1.05	K	0.020		0.50	REF
b2	0.047 REF		1.20 REF		L	1.102	1.118	28.00	28.40
c	0.020	0.030	0.500	0.750	L1	0.043	0.051	1.10	1.30
D	0.396	0.404	10.06	10.26	L2	0.036	0.043	0.92	1.08
E	0.583	0.598	14.80	15.20	M	0.067 REF		1.70	REF
e	0.100 *		2.54*		N	0.012	REF	0.30	REF
F	0.106 REF		2.70 REF						

- Notes: 1.Controlling dimension: millimeters.  
 2.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.  
 3.If there is any question with packing specification or packing method, please contact your local CYStek sales office.

**Material:**

- Lead: Pure tin plated.
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0.

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