

## 8Amp. Super fast Plastic Rectifiers

# MSR0860AF2

$I_{F(AV)}$	8A
$V_{RRM}$	600V
$I_{FSM}$	125A
trr	25ns
$T_j$	175°C
$V_{F(MAX)}$	2V

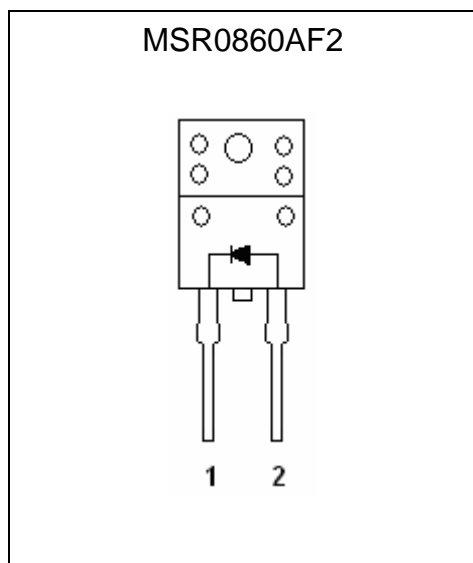
### Features

- 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

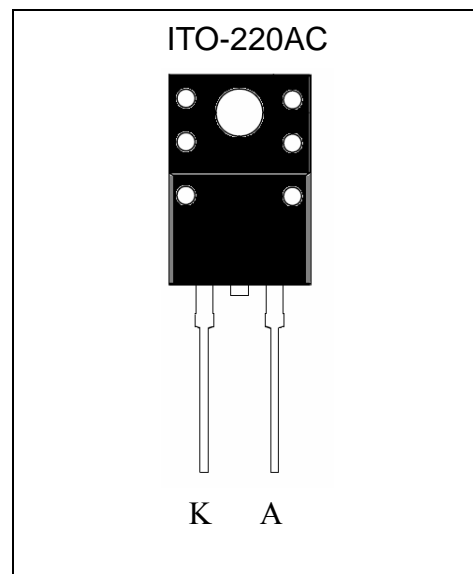
### Mechanical Data

- Case: ITO-220AC molded plastic
- Mounting Position: Any
- Weight: 1.85 grams, 0.065 ounce approximately
- Terminals: Pure tin plated, solderable per J-STD-002 and JESD22-B102
- Epoxy: UL 94V-0 rate flame retardant
- Mounting torque: 10 in.-lb. maximum

### Equivalent Circuit



### Outline



**Maximum Ratings and Electrical Characteristics**

(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	$V_{RRM}$			600	V
Maximum RMS voltage	$V_{RMS}$			420	V
Maximum DC blocking voltage	$V_{DC}$			600	V
Maximum instantaneous forward voltage at $I_F=8A$	$V_F$		1.8	2	V
Maximum Average forward rectified current @ $T_C=100^\circ C$	$I_{F(AV)}$			8	A
Non-repetitive peak forward surge current @ 8.3ms single half sine wave superimposed on rated load (JEDEC method)	$I_{FSM}$			125	A
Maximum instantaneous reverse current at	$V_R=600V, T_C=25^\circ C$	$I_R$		0.025	mA
	$V_R=600V, T_C=125^\circ C$			5	
Maximum reverse recovery time	$I_F=1A, V_R=30V, dI_F/dt=100A/\mu s$	$t_{rr}$	16	25	ns
Typical junction capacitance @ $f=1MHz$ and applied 4V reverse voltage	$C_J$		23		pF
Isolation voltage from terminal to heatsink, $t=1$ minute	$V_{AC}$	2500			V
Storage temperature range	$T_{stg}$	-65		+175	°C
Operating junction temperature range	$T_J$	-65		+175	°C

**Thermal Data**

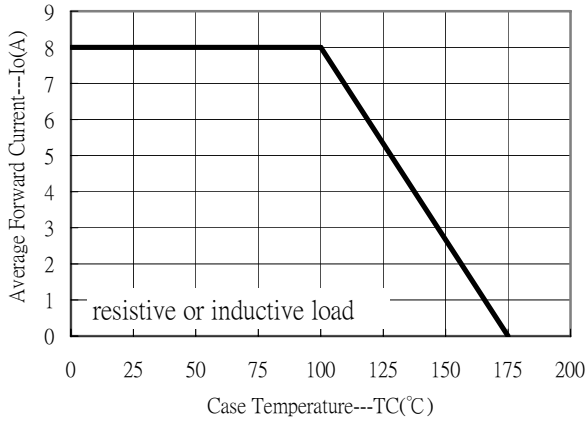
Parameter	Symbol	Value	Unit
Maximum Thermal Resistance, Junction-to-case	$R_{th,j-c}$	5	°C/W
Maximum Thermal Resistance, Junction-to-ambient	$R_{th,j-a}$	60	°C/W

**Ordering Information**

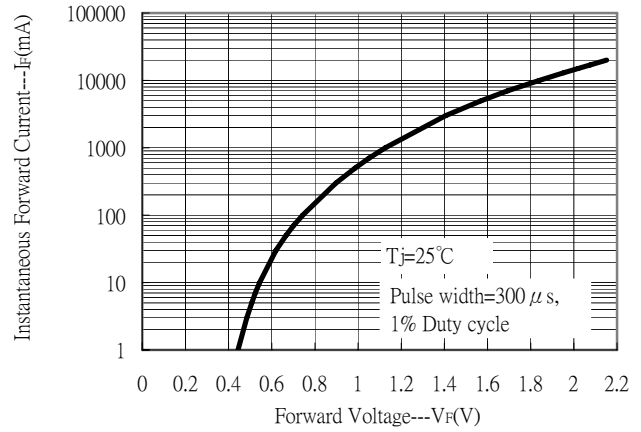
Device	Package	Shipping
MSR0860AF2	ITO-220AC (RoHS compliant package)	50 pcs / Tube, 40 Tubes/Box

## Characteristic Curves

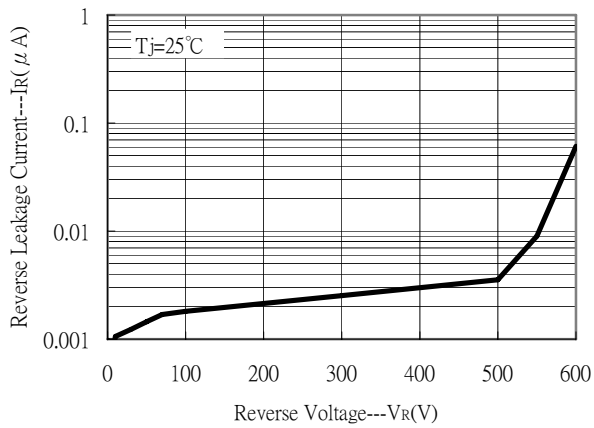
Forward Current Derating Curve



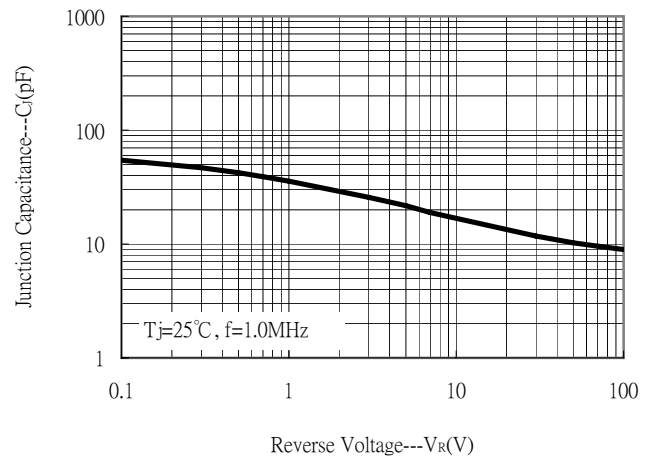
Forward Current vs Forward Voltage



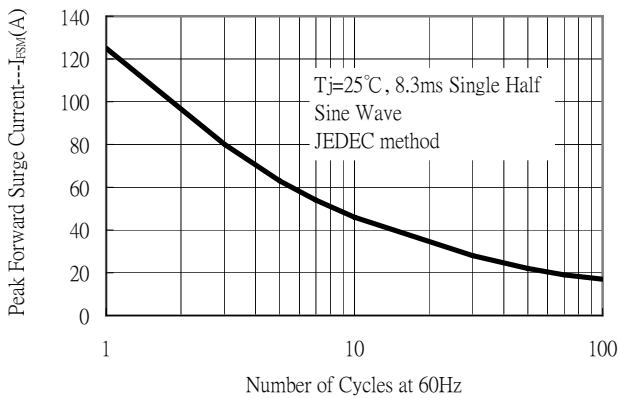
Reverse Leakage Current vs Reverse Voltage



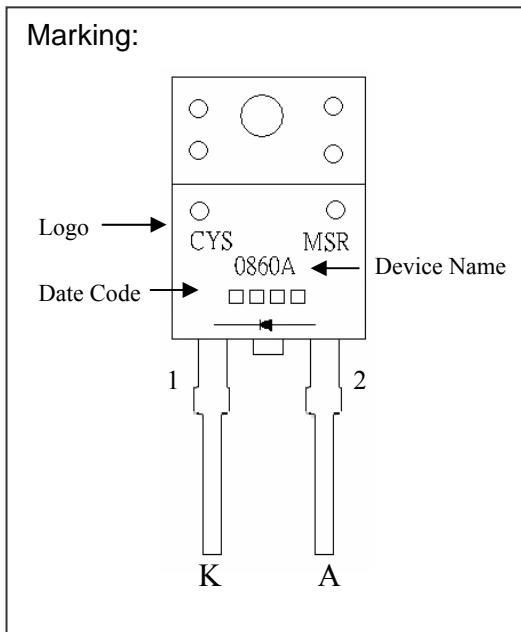
Junction Capacitance vs Reverse Voltage



Maximum Non-Repetitive Forward Surge Current

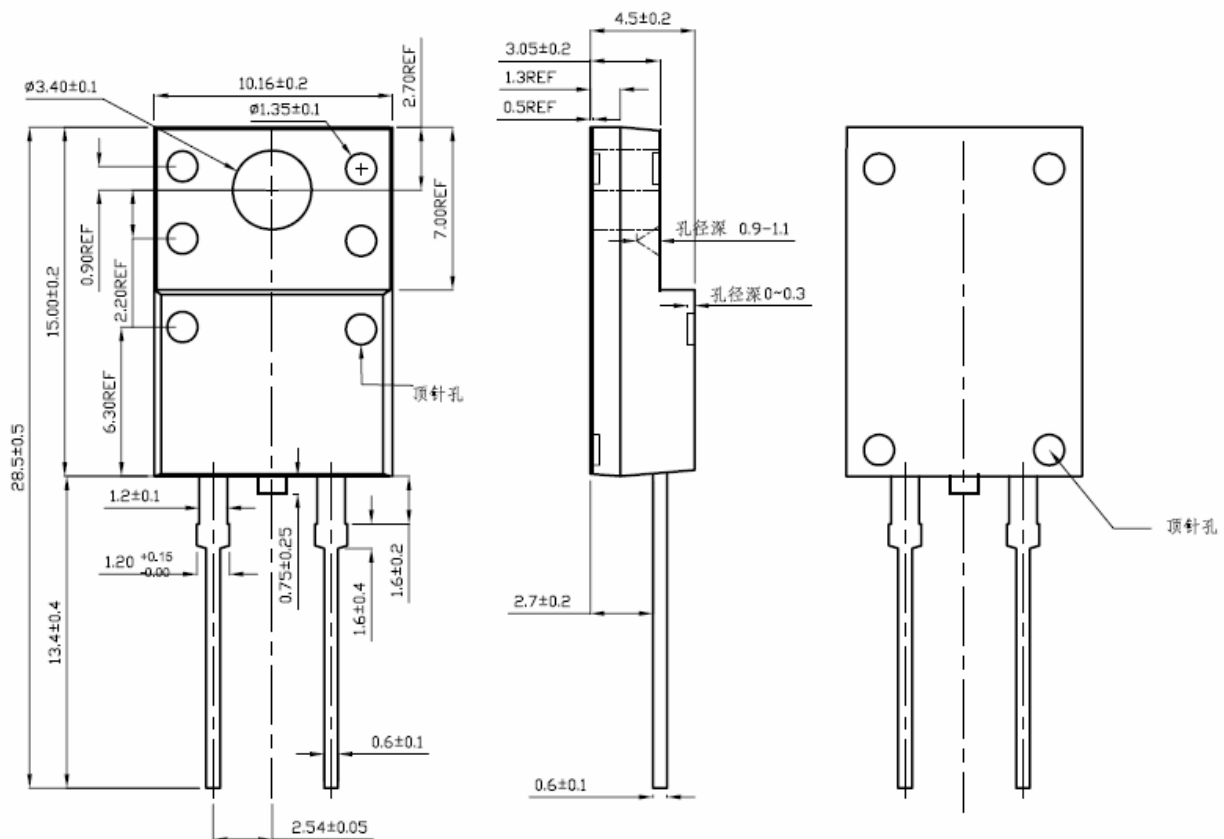


## ITO-220AC Dimension



2-Lead ITO-220AC Plastic Package  
 CYStek Package Code: F2

Style: Pin 1.Cathode 2.Anode



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