

FEATURES

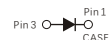
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Fast switching for high efficiency
- Low forward voltage drop
- Ultrafast Recovery Time
- High surge current capability
- For use in free wheeling , snubber , clamp ,inversion welder , PFC ,Plating Power Supply
- High temperature soldering guaranteed:260°C/10 seconds, 0.25"(6.35mm)from case
- Component in accordance to RoHS 2011/65/EU

MECHANICAL DATA

- Case: JEDEC TO-220AC/ ITO-220AC/TO-263 molded plastic body
- Terminals: Lead solderable per MIL-STD-750,method 2026
- Polarity: As marked
- Mounting Position: Any

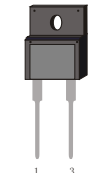
TO-220AC

MURS30120



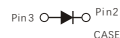
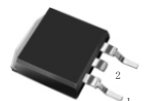
ITO-220AC

MURFS30120



TO-263

MURS30120D2



MAXIMUM RATINGS

(Ratings at 25°C ambient temperature unless otherwise specified)

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	1200	V
Maximum average forward rectified current (see fig.1)	$I_{F(AV)}$	30.0	A
Surge non repetitive forward current $t_p=10ms$ sinusoidal	I_{FSM}	280	A
Maximum operating junction temperature	T_J	175	°C
Storage temperature range	T_{stg}	-55 to +175	°C

ELECTRICAL CHARACTERISTICS (T_A=25 °C Unless otherwise noted)

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Instantaneous forward voltage	I _F =30.0A	T _A =25 °C	V _F ¹⁾	2.5	3.4	V
		T _A =125 °C		1.9	-	
Reverse current	V _R =1200V	T _A =25 °C	I _R ²⁾	0.1	10	μ A
		T _A =125 °C		16	300	

Notes: 1.Pulse test: 300 μs pulse width,1% duty cycle

2. Pulse test: pulse width ≤40ms

DYNAMIC RECOVERY CHARACTERISTICS (T_J=25 °C)

Parameters	Test Conditions	Symbol	Min.	Typ.	Max.	Units
Reverse recovery time	I _F =0.5A, I _R =1A, I _{RR} =0.25A	t _{rr}	-	50	60	ns
	I _F =1A, dI _F /dt=100A/μs, V _R =30V		-	35	55	ns

THERMAL CHARACTERISTICS

Parameter	Symbol	MURS30120	MURFS30120	MURS30120D2	Unit
Typical thermal resistance ³⁾	R _{θJC}	1.3	3.5	1.3	°C/W

3.Thermal resistance from junction to case

FIG.1-FORWARD CURRENT DERATING CURVE

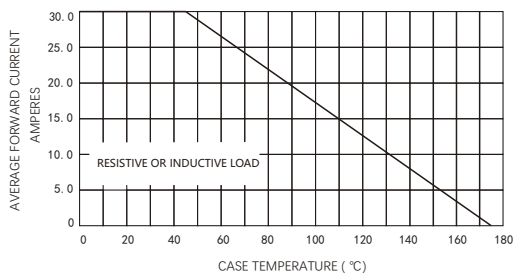


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

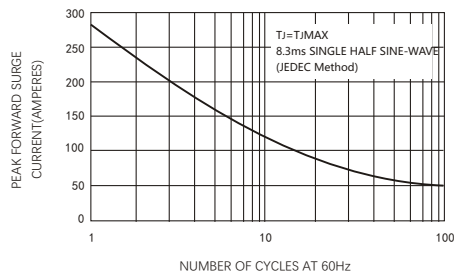


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

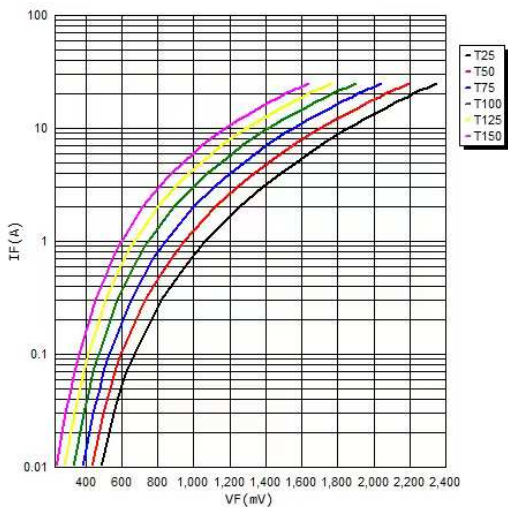
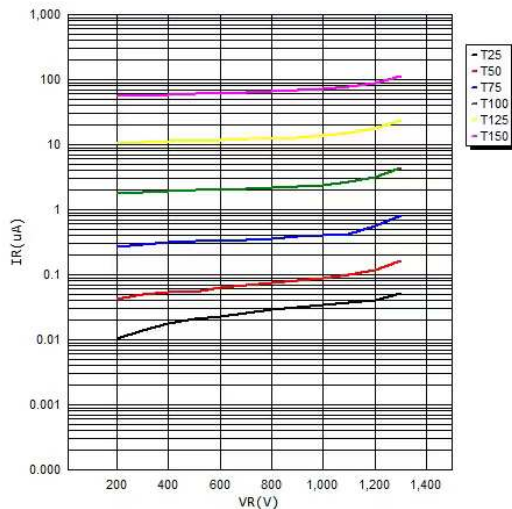
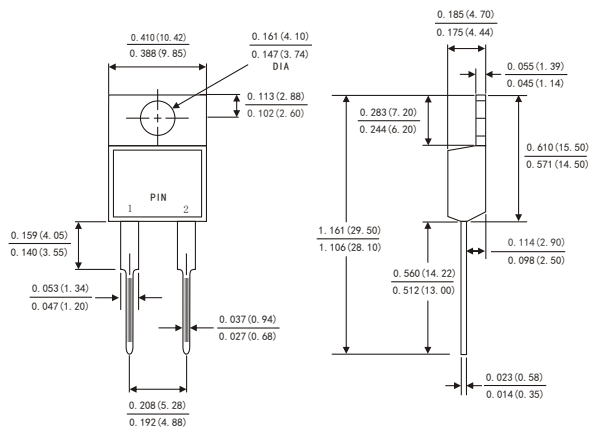


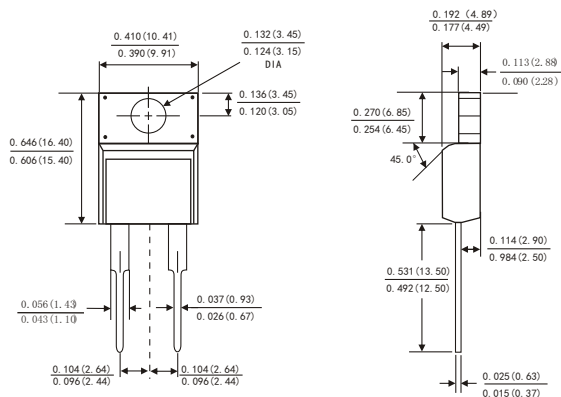
FIG.4-TYPICAL REVERSE CHARACTERISTICS



TO-220AC

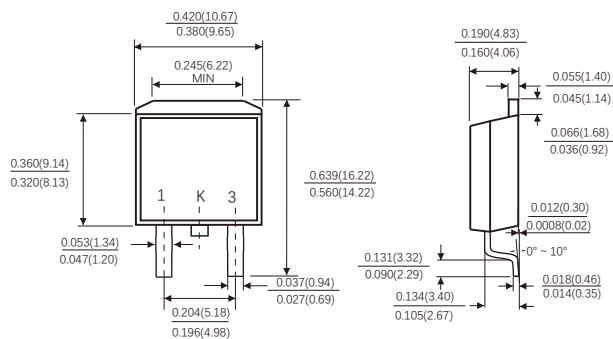


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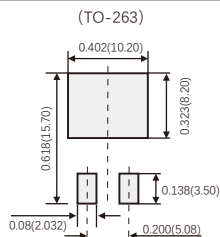


Dimensions in inches and (millimeters)

TO-263 D2PAK



Suggested Pad Layout



(设计者可参考推荐值根据焊接工艺要求自行确定适合的焊盘尺寸)
(Designers can refer to the recommended values according to the manufacturing process requirements to determine the appropriate pad size)

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