PS30U45(F,B,H)CT thru PS30U120(F,B,H)CT

30A Schottky Barrier Rectifier

FEATURE

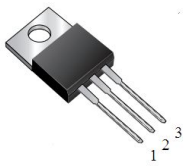
- High current capability
- Ultra low forward voltage drop
- Low power loss, high efficiency
- High surge capability
- High ESD capability
- High temperature soldering guaranteed: 260°C/10s/0.25"(6.35mm) from case

MECHANICAL DATA

- Case: Molded with UL-94 Class V-0 recognized Flame Retardant Epoxy
- Mounting position: any

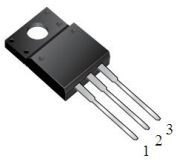
TYPICAL APPLICATIONS

For use in low voltage, high frequency rectifier of switching mode power supplies, freewheeling diodes, DC/DC converters and polarity protection application.



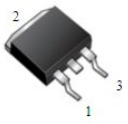
TO-220AB

PS30UXXCT



ITO-220AB

PS30UXXFCT

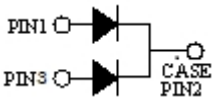


TO-263

PS30UXXBCT

TO-262

PS30UXXHCT



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

MAXIMUM RATINGS

Parameter		Symbol	PS30U45 CT	PS30U60 CT	PS30U100 CT	PS30U120 CT	units
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	45	60	100	120	V
Maximum RMS Voltage		V_{RMS}	32	42	70	84	V
Maximum DC Blocking Voltage		V_{DC}	45	60	100	120	V
Maximum Average Forward Rectified Current at T_C=90°C	total device	$I_{F(AV)}$	30.0				A
	per diode		15.0				
Peak Forward Surge Current 8.3ms Single Half sine-wave superimposed on rate load per diode (JEDEC method)		I_{FSM}	175				A
Junction Capacitance (Note1)		C_J	780		500		pF
Storage Temperature Range		T_{STG}	-55 to +150				°C
Operation Temperature Range		T_J	-55 to +150				°C

ELECTRONICAL CHARACTERISTICS

Parameter		Symbol	PS30U45 CT	PS30U60 CT	PS30U100 CT	PS30U120 CT	units
Maximum Forward Voltage Drop per diode at 15A (Note 2)		V_F	0.55	0.60	0.78	0.85	V
Maximum DC Reverse Current at rated DC blocking voltage (Note 2)	@ T_C =25°C	I_R	0.25		0.1		mA
	@ T_C=100°C		50.0		30.0		

THERMAL CHARACTERISTICS

Parameter	Symbol	ITO-220	TO-220	TO-262 TO-263	units
Typical Thermal Resistance (Note 3)	$R_{th\ (JC)}$	3.0	2.0	2.0	°C/W

Note:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc.
2. Pulse test: 300 μs pulse width, 1% duty cycle.
3. Thermal Resistance from Junction to Case Mounted on heatsink.