

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

30A Schottky Barrier Rectifier

FEATURE

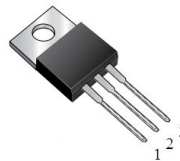
- High current capability
- Ultra low forward voltage drop
- Low power loss, high efficiency
- High surge capability
- High ESD capability
- High temperature soldering guaranteed:
260°C/10s/0.25"(6.35mm) from case

MECHANICAL DATA

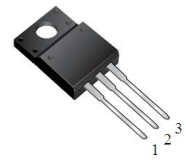
- Case: Molded with UL-94 Class V-0 recognized Flame Retardant Epoxy
- Mounting position: any

TYPICAL APPLICATIONS

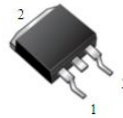
For use in low voltage, high frequency rectifier of switching mode power supplies, freewheeling diodes, DC/DC converters and polarity protection application.



TO-220AB
PS30UXXCT



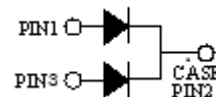
ITO-220AB
PS30UXXFCT



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 $T_C=90^\circ\text{C}$	total device	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)	I_R	@ $T_C=25^\circ\text{C}$	0.25		0.1	mA
		@ $T_C=100^\circ\text{C}$	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.