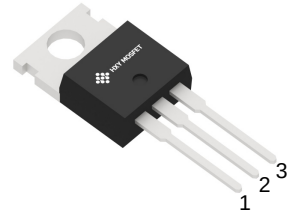


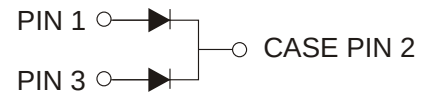


Features

- High speed switching capability
- High current capability
- High forward surge capability
- Low power losses. High efficiency
- For use in low voltage, high frequency inverters



TO-220C(TO-220AB)



Maximum Ratings (Ta=25°C unless otherwise noted)

Parameter		Symbols	Value	Units
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	400	V
Maximum RMS voltage		V_{RMS}	400	V
Maximum DC Blocking Voltage		V_{DC}	400	V
Maximum Average Forward Rectified Current	Per Leg	I_o	10	A
	Total		20	
Peak Forward Surge Current, 8.3ms Single Half Sine-wave		I_{FSM}	160	A
Operating Temperature Range		T_J	150	°C
Storage Temperature Range		T_{STG}	-40 ~ +150	°C
Typical Thermal Resistance (Note1) TO-247/PT TO-247/PTS		$R_{\theta JA}/R_{\theta JC}$	2/4	°C/W

Note1: Thermal resistance from Junction to case per leg mounted on heatsink.

Electrical Characteristics(Ta=25°C unless otherwise specified)

Characteristics		Symbols	Value		Units
Forward Voltage Drop(Note2)		V_F	Typ	Max	V
at IF=3A	TA=25°C		0.91	-	
	TA=125°C		0.76	-	
at IF=5A	TA=25°C		0.97	-	
	TA=125°C		0.83	-	
at IF=10A	TA=25°C		1.08	1.3	
	TA=125°C		0.95	-	
Maximum Reverse Current at $V_R=400V$	TA=25°C	I_R	0.01	1	uA
	TA=125°C		5	-	uA
Maximum Reverse Recovery Time at IF=0.5A, IR=1A, IRR=0.25A		T_{RR}	-	35	nS

Note2: Pulse test: 300 μ s pulse width, 1 % duty cycle



Typical Characteristics

FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

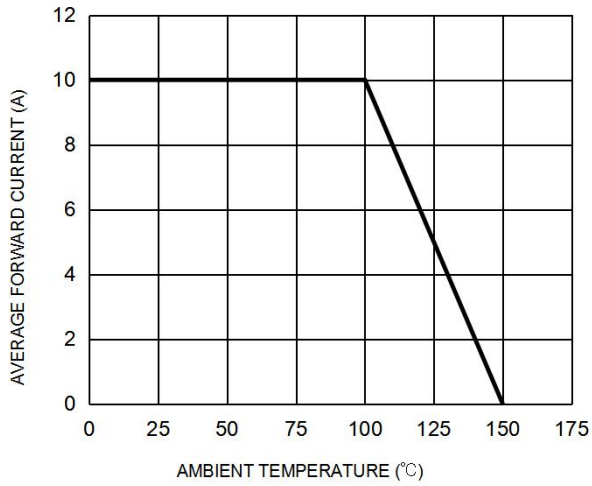


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

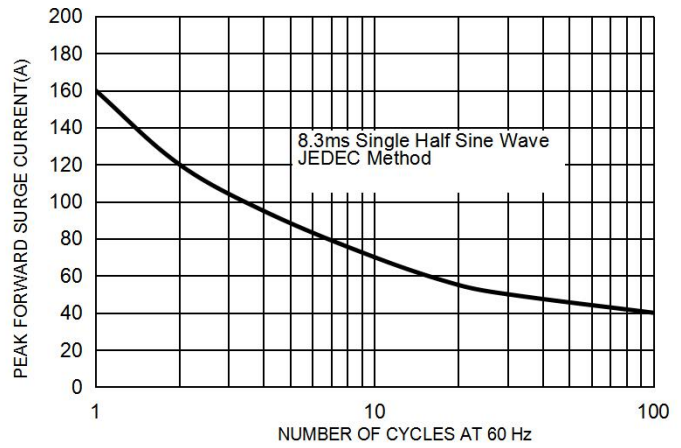


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

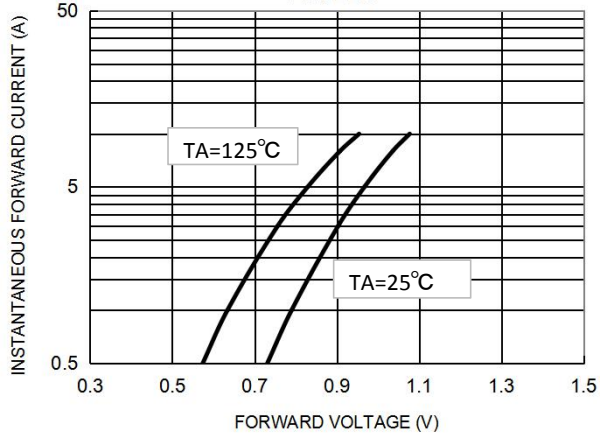
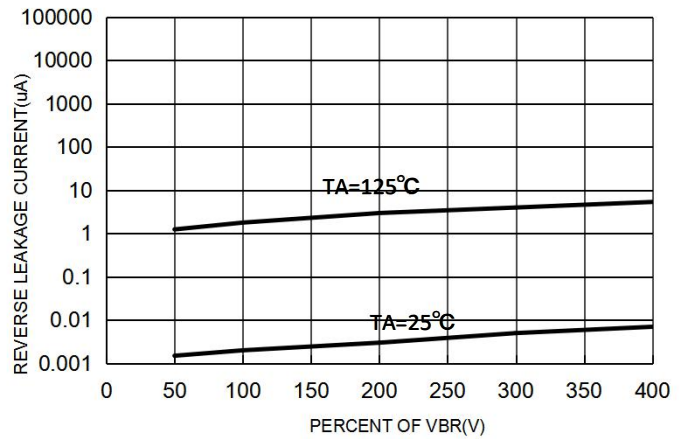
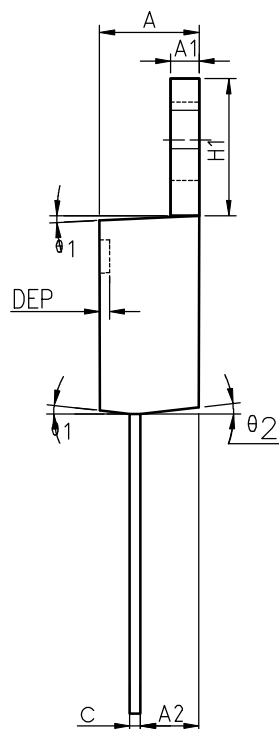
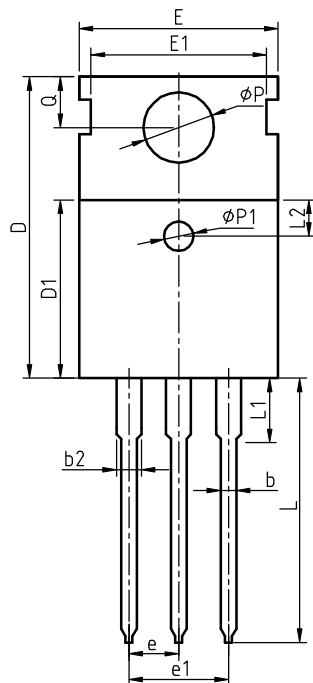


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



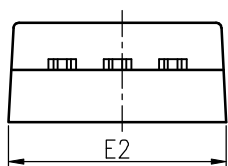


Package Information
TO-220C(TO-220AB)



COMMON DIMENSIONS

SYMBOL	MIN	NOM	MAX	MIN	NOM	MAX
A	4.40	4.57	4.70	0.173	0.180	0.185
A1	1.27	1.30	1.33	0.050	0.051	0.052
A2	2.35	2.40	2.50	0.093	0.094	0.098
b	0.77	0.80	0.90	0.030	0.031	0.035
b2	1.17	1.27	1.36	0.046	0.050	0.054
c	0.48	0.50	0.56	0.019	0.020	0.022
D	15.40	15.60	15.80	0.606	0.614	0.622
D1	9.00	9.10	9.20	0.354	0.358	0.362
DEP	0.05	0.10	0.20	0.002	0.004	0.008
E	9.80	10.00	10.20	0.386	0.394	0.402
E1	-	8.70	-	-	0.343	-
E2	9.80	10.00	10.20	0.386	0.394	0.402
e		2.54	BSC		0.100	BSC
e1		5.08	BSC		0.200	BSC
H1	6.40	6.50	6.60	0.252	0.256	0.260
L	12.75	13.50	13.65	0.502	0.531	0.537
L1	-	3.10	3.30	-	0.122	0.130
L2		2.50	REF		0.098	REF
P	3.50	3.60	3.63	0.138	0.142	0.143
P1	3.50	3.60	3.63	0.138	0.142	0.143
Q	2.73	2.80	2.87	0.107	0.110	0.113
θ 1	5°	7°	9°	5°	7°	9°
θ 2	1°	3°	5°	1°	3°	5°
θ 3	1°	3°	5°	1°	3°	5°





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