

ULTRAFST RECOVERY RECTIFIERS

Reverse Voltage - 400 V

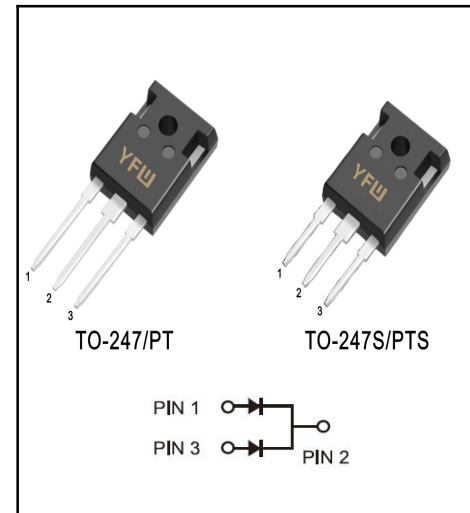
Forward Current - 50 A

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
- ◆Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

- ◆Case: TO-247/PT TO-247S/PTS
- ◆Solder bath temperature 275°C maximum, 10s per JESD22-106



Primary Characteristic

I_o	2*25A
V_{RRM}	400V
I_{FSM}	420A
V_F	1.00V
T_J Max	150°C

Maximum Ratings (Per Leg) at Ta=25°C unless otherwise specified

Parameter	Symbols	Value	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	400	V
Maximum RMS voltage	V_{RMS}	280	V
Maximum DC Blocking Voltage	V_{DC}	400	V
Maximum Average Forward Rectified Current	Per Leg	25	A
	Total	50	
Peak Forward Surge Current, 8.3ms Single Half Sine-wave	I_{FSM}	420	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	°C/W

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

Electrical Characteristics (Per Leg) unless otherwise specified

Characteristics		Symbols	Value		Units
Forward Voltage Drop(Note2)		V _F	Typ	Max	V
at IF=5A	TA=25°C		0.88	-	
	TA=125°C		0.70	-	
at IF=10A	TA=25°C		1.00	-	
	TA=125°C		0.81	-	
at IF=25A	TA=25°C		1.20	1.39	
	TA=125°C		1.00	-	
Maximum Reverse Current at V _R =400V	TA=25°C	I _R	0.1	1	uA
	TA=125°C		10	-	uA
Maximum Reverse Recovery Time at IF=0.5A, IR=1A, IRR=0.25A		T _{RR}	-	35	nS

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

RATINGS AND CHARACTERISTIC CURVES

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

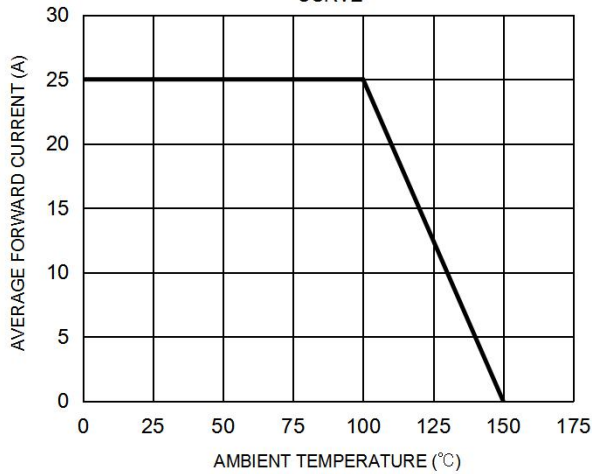


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

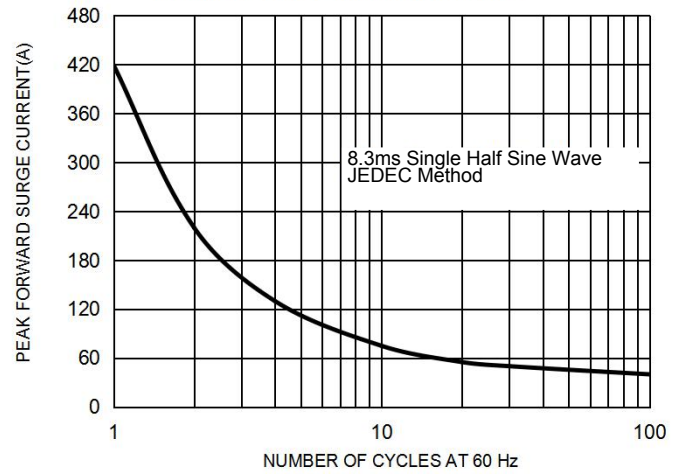


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

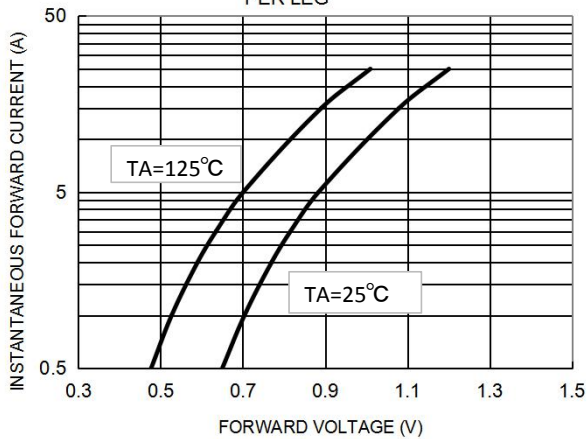
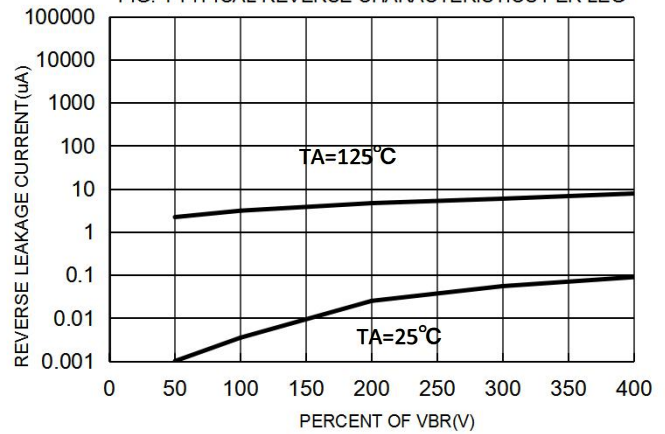
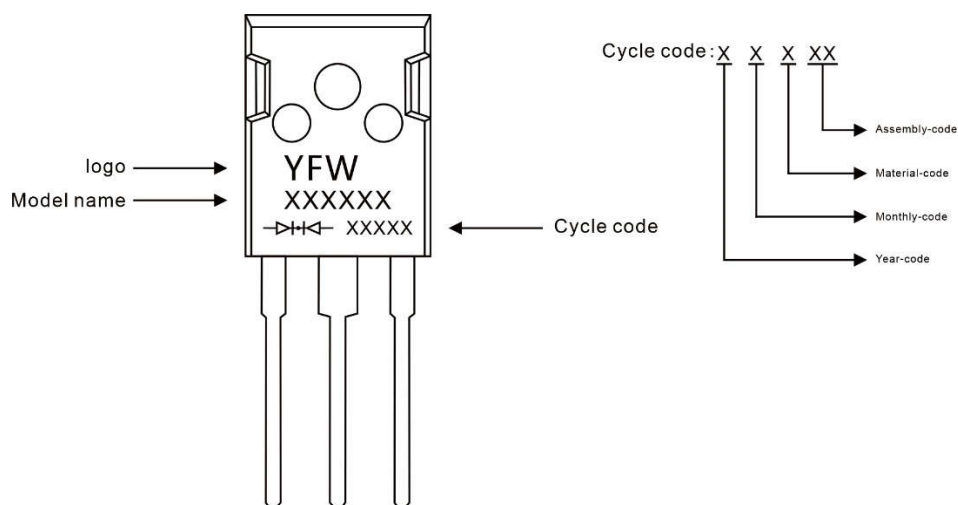


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



Marking Diagram



Ordering information

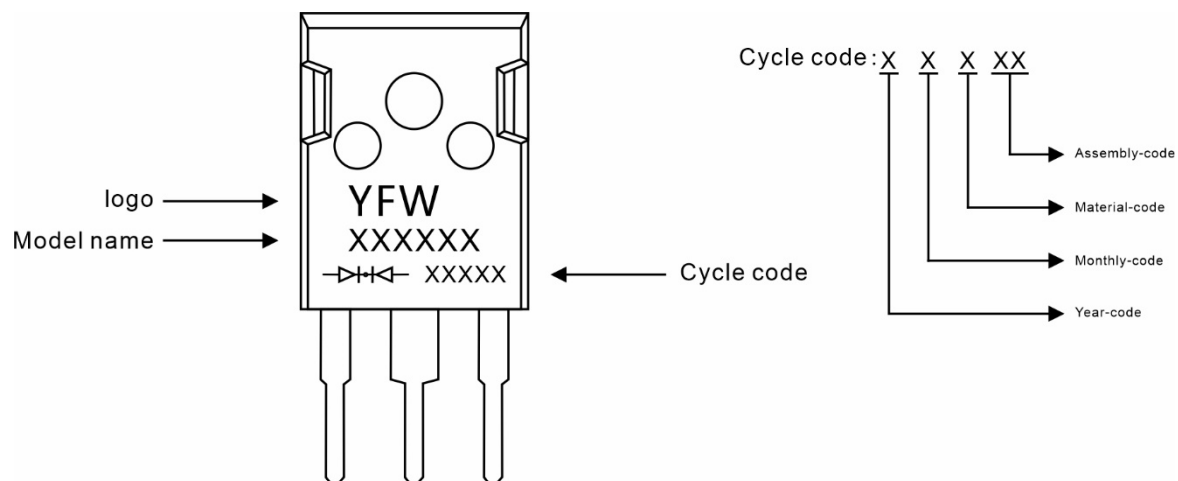
Model name	Package	Unit Weight	Base Quantity	Packing Quantity
MUR5040PT	TO-247	0.209oz(5.93g)	30pcs/tube	600PCS/Box 2400PCS/Carton

Package Dimensions

TO-247

Symbol	Dimensions in mm		Dimensions in Inch	
	Min.	Max.	Min.	Max.
A	4.90	5.10	0.193	0.201
A1	1.90	2.10	0.075	0.083
A2	2.29	2.54	0.090	0.100
b	1.00	1.40	0.039	0.055
b1	2.00	2.20	0.079	0.087
b2	3.00	3.20	0.118	0.126
c	0.50	0.70	0.020	0.028
D	15.75	16.05	0.620	0.632
E	20.20	20.80	0.795	0.819
e	5.45 (BSC)		0.215 (BSC)	
e1	10.90 (BSC)		0.429 (BSC)	
F	6.05	6.25	0.238	0.246
F1	5.80	6.00	0.228	0.236
L	20.10	20.40	0.791	0.803
L1	4.05	4.35	0.159	0.171
Φ	3.50	3.70	0.138	0.146

Marking Diagram



Ordering information

Model name	Package	Unit Weight	Base Quantity	Packing Quantity
MUR5040PTS	TO-247S	0.158oz(4.48g)	30pcs/tube	600PCS/Box 2400PCS/Carton

Package Dimensions

TO-247S

Symbol	Dimensions in mm		Dimensions in Inch	
	Min.	Max.	Min.	Max.
A	15.0	16.0	0.59	0.63
B	19.5	20.5	0.77	0.81
C	33.5	35.5	1.32	1.40
D	5.0	6.0	0.20	0.24
E	3.5	4.5	0.14	0.18
F	2.5	3.5	0.10	0.14
G	1.75	2.5	0.07	0.14
H	3.0	4.0	0.12	0.16
I	9.0	11.0	0.35	0.43
J	4.9	5.1	0.19	0.20
K	1.0	1.3	0.04	0.05
L	3.75	4.25	0.15	0.17
M	4.75	5.25	0.19	0.21
N	1.8	2.2	0.07	0.09
O	0.45	0.6	0.018	0.024
P	5.08		0.2	
Q	1.2	1.3	0.05	0.051

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