MOSPEC

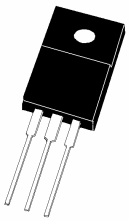
S30M45F

Switchmode Schottky Barrier Power Rectifiers

Using the Schottky Barrier principle with high temperature operation metal. The properitary barrier technology allows for reliable operation up to 150℃ junction temperature. Typical application are in switching Mode Power Supplies such as adaptators, Photovoltaic Solar cell protection,free-wheeling and polarity protection diodes.

SCHOTTKY BARRIER RECTIFIERS

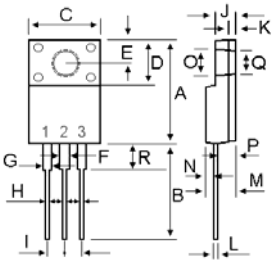
30 AMPERES
45 VOLTS



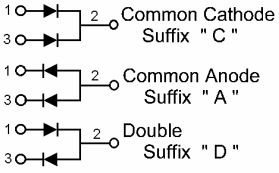
ITO-220AB

Features

- ∗Ultra Low Forward Voltage.
- ∗Low Switching noise.
- ∗High Current Capacity
- ∗Low Power Loss & High efficiency.
- ∗150℃ Operating Junction Temperature
- ∗Low Stored Charge Majority Carrier Conduction.
- ∗Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O
- ∗ ESD: 4KV(Min.) Human-Body Model
- ∗*In compliance with EU RoHs 2002/95/EC directives*
- ∗Mounting Torqure: 5 in-lbs.Max.



DIM	MILLIMETERS	
	MIN	MAX
A	15.05	15.15
B	13.35	13.45
C	10.00	10.10
D	6.55	6.65
E	2.65	2.75
F	1.55	1.65
G	1.15	1.25
H	0.55	0.65
I	2.50	2.60
J	3.00	3.20
K	1.10	1.20
L	0.55	0.65
M	4.40	4.60
N	1.15	1.25
O	3.35	3.45
P	2.65	2.75
Q	3.15	3.25
R	3.60	3.80



MAXIMUM RATINGS

Characteristic	Symbol	S30M45F	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	45	V
RMS Reverse Voltage	$V_{R(RMS)}$	31.5	V
Average Rectifier Forward Current (per diode) Total Device (Rated V_R),	$I_{F(AV)}$	15 30	A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfware, single phase, 60Hz)	I_{FSM}	340	A
Operating and Storage Junction Temperature Range	T_J , T_{stg}	-65 to +150	℃

THERMAL RESISTANCES

Typical Thermal Resistance junction to case(per diode)	$R_{\theta j\text{-}c}$	7	℃/w

ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	S30M45F			Unit
		Min	Typ.	Max.	
Maximum Instantaneous Forward Voltage (per diode)	V_F				V
(I_F =0.1 Amp T_C = 25℃)		---	0.22	0.25	
(I_F =8.0 Amp T_C = 25℃)		---	0.40	0.42	
(I_F =15.0 Amp T_C = 25℃)		---	0.46	0.49	
Maximum Instantaneous Reverse Current	I_R				mA
(Rated DC Voltage, T_C = 25℃)		---	0.07	0.15	
(Rated DC Voltage, T_C = 125℃)		---	15	25	

S30M45F

FIG-1 FORWARD CURRENT DERATING CURVE

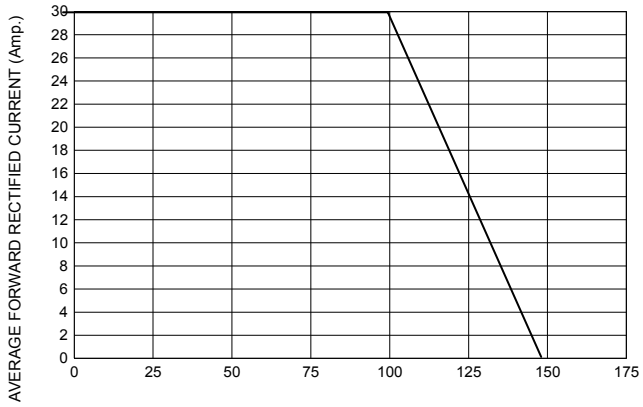


FIG-2 TYPICAL FORWARD CHARACTERISITICS

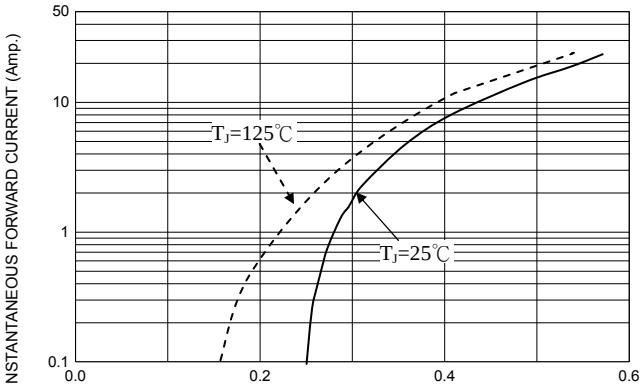


FIG-3 TYPICAL REVERSE CHARACTERISTICS

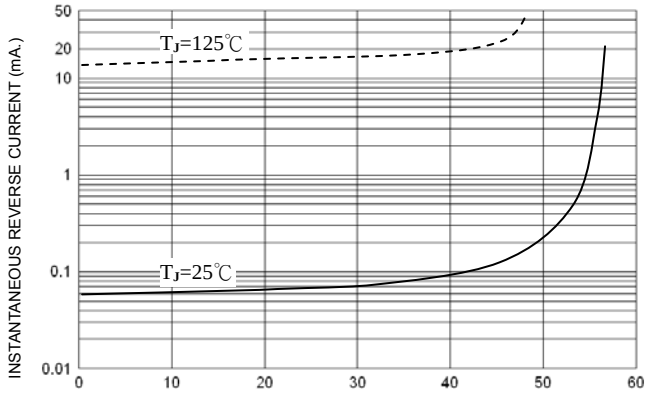


FIG-4 TYPICAL JUNCTION CAPACITANCE

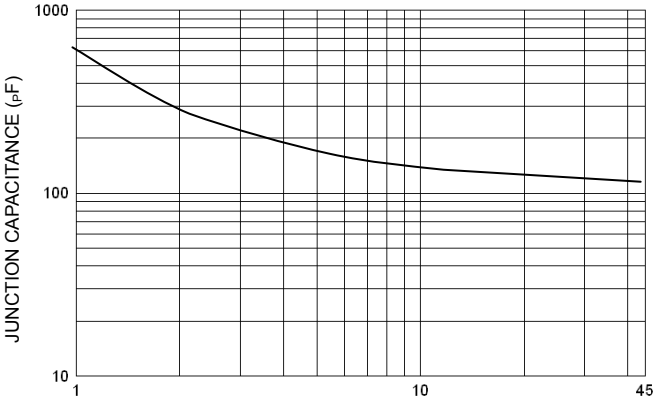


FIG-5 PEAK FORWARD SURGE CURRENT

