

**SURFACE MOUNT
SCHOTTKY BARRIER RECTIFIER**

**REVERSE VOLTAGE – 45 Volts
FORWARD CURRENT – 3.0 Amperes**

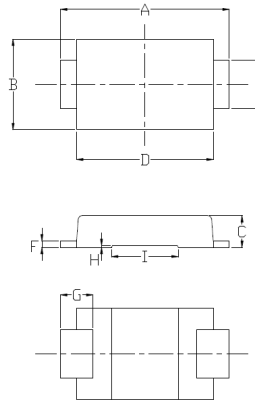
FEATURES

- Very low profile package
- High efficiency
- Extremely fast switching
- Negligible switching losses
- Low forward voltage drop, low power loss
- Meet IEC-61000-4-2 standard, level 4

MECHANICAL DATA

- Case: JEDEC DO-221AC
- Case Material: “Green” molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl.) “Halogen-free”
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Lead Free Plating (Matte Tin Finish.)
- Component in accordance to RoHs 2002/95/EC
- Marking code: 3A45D

F3-D



F3-D			
DIM.	MIN.	TYP.	MAX
A	4.80	5.20	5.60
B	2.25	2.80	2.95
C	0.90	1.00	1.10
D	3.95	4.20	4.60
E	1.25	1.50	1.65
F	0.15	0.20	0.40
G	0.75	1.00	1.50
H	0.025	0.05	0.075
I	1.90	2.05	2.20

All dimension in millimeter

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	45	V
Maximum DC blocking voltage	V_{DC}	45	V
Average rectified output current	$I_{(AV)}$	3.0	A
	@ $T_c=100^\circ C$		
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load.	I_{FSM}	50	A
Peak repetitive surge current (Square Wave 50kHz, Duty 10%, $T_c=100^\circ C$)	I_{FRM}	6	A
Operating junction temperature range	T_J	-55 to +150	°C
Storage temperature range	T_{STG}	-55 to +150	°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS	SYMBOL	MAX	UNIT
Forward voltage (Note1)	$I_F=3.0A$ $T_J=25^\circ C$ $T_J=125^\circ C$	V_F	0.48 0.4	V
Leakage current (Note1)	$V_R=45V$ $T_J=25^\circ C$ $T_J=125^\circ C$	I_R	0.5 100	mA
Typical junction capacitance (Note2)		C_J	265	pF

THERMAL CHARACTERISTICS

THERMAL CHARACTERISTIC	SYMBOL	TYP.	UNIT
Typical thermal resistance (Note3)	R_{thJC}	18	°C/W
	R_{thJL}	23	
	R_{thJa}	88	

Note :

- (1) 300us pulse width, 2% duty cycle.
- (2) Measured at 1.0MHz and applied voltage of 4.0VDC.
- (3) Thermal resistance test performed in accordance with JESD-51. Unit mounted on glass-epoxy substrate with 1oz/ft²_5mmx7mm copper pad.

REV. 3, SEP.-2014, KSHP21

RATING AND CHARACTERISTIC CURVES FB3A45D



FIG.1- FORWARD CURRENT DERATING CURVE

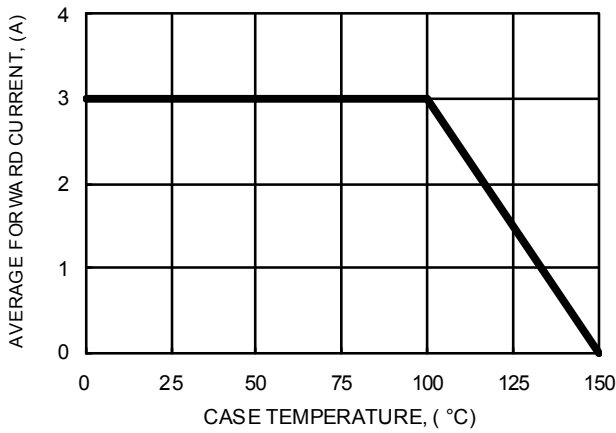


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

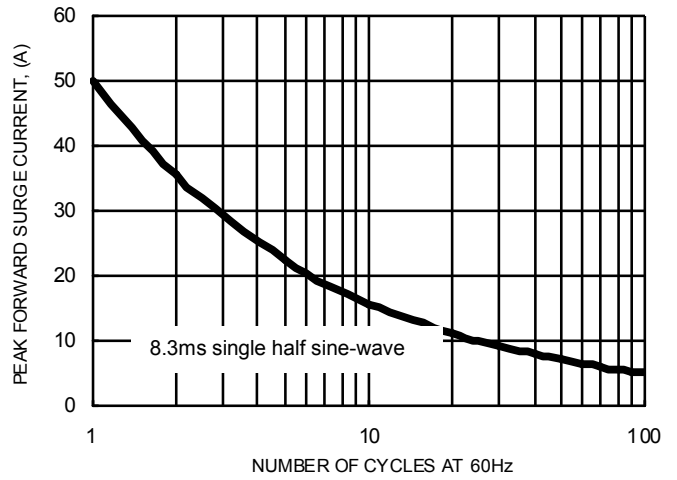


FIG.3- TYPICAL FORWARD CHARACTERISTICS

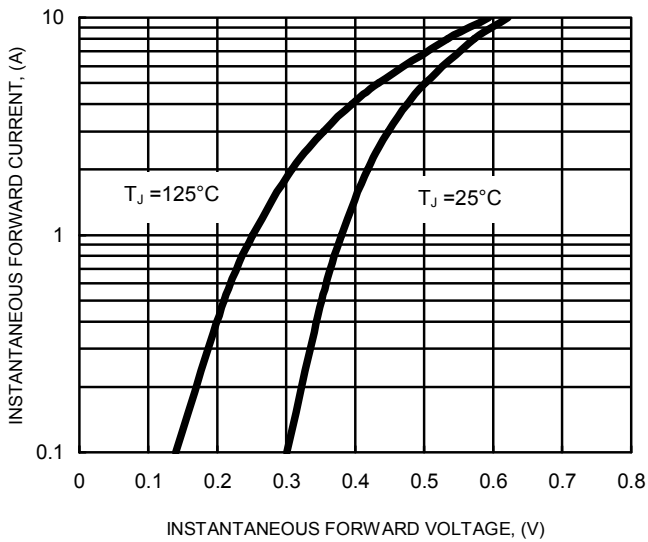


FIG.4- TYPICAL JUNCTION CAPACITANCE

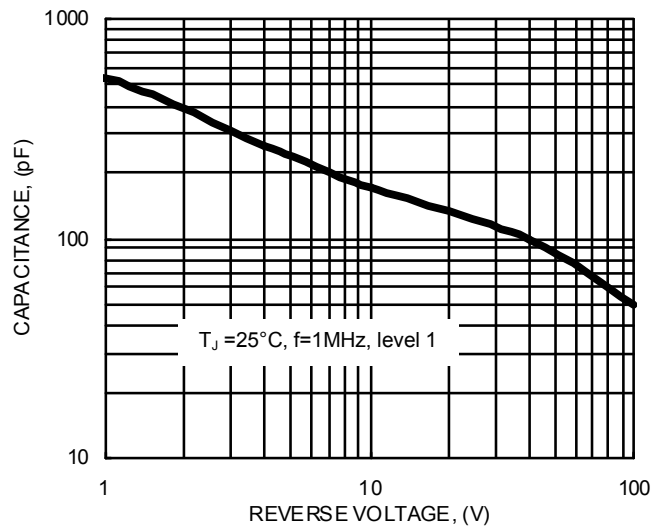
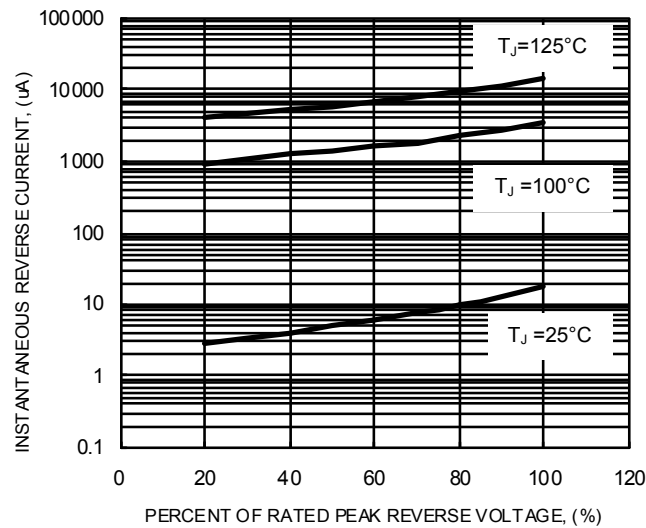


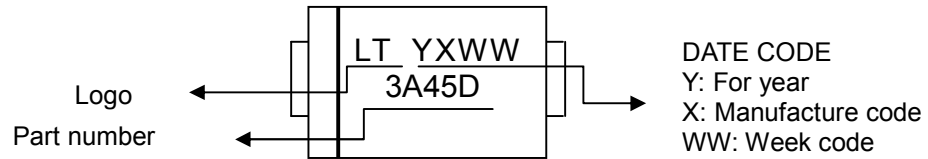
FIG.5- TYPICAL REVERSE CHARACTERISTICS



**MARKING AND PACKAGING INFORMATION
FB345D**



Marking Information :



Packaging Information :

DEVICE	Q'TY/REEL (PCS)	REEL DIA. (INCH)	Q'TY/BOX (PCS)	Q'TY/CARTON (PCS)
FB3A45D	10000	13	10000	120K

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