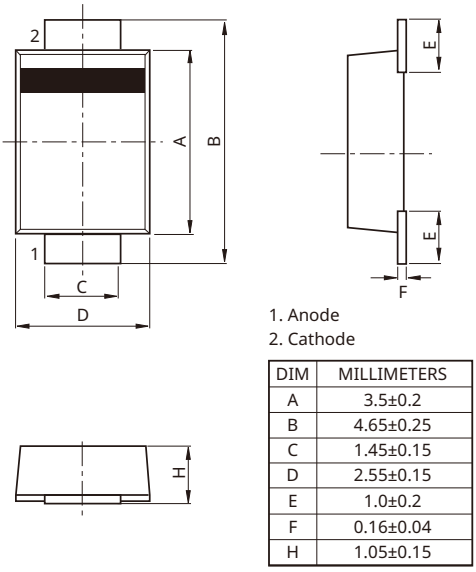
Surface Mounted Schottky Barrier Rectifier

SMAFAB54J

SMAFAB54J is designed as a metal-silicon junction to achiece low forward voltage. It enables low power loss and high efficiency.

PACKAGE DIMENSION(SMAFA)



DIM	MILLIMETERS
A	3.5±0.2
B	4.65±0.25
C	1.45±0.15
D	2.55±0.15
E	1.0±0.2
F	0.16±0.04
H	1.05±0.15

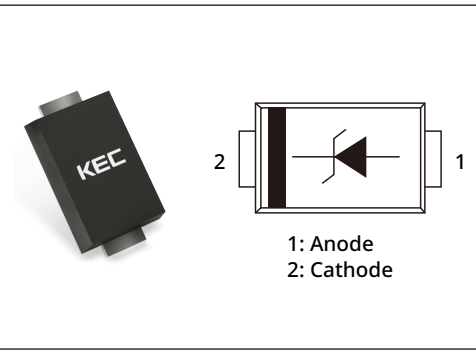
FEATURES

- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- Low leakage current
- Package size: 3.5X2.55X1.05mm^3
- Pb-Free, Halogen-Free, Rohs compliant

MECHANICAL DATA

- Package: SMAFA
- Terminal: Solderable per MIL-STD-750, Method 2026
- Polarity indicator: Cathode band
- Weight: ≒0.027grams

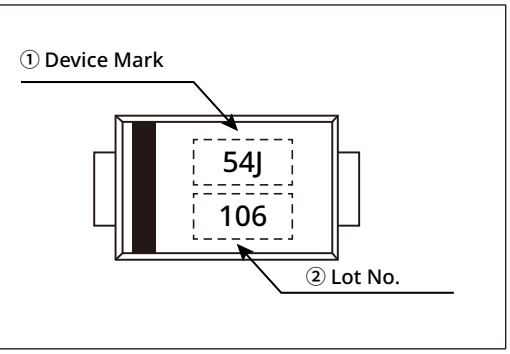
PIN CONFIGURATION



APPLICATION

- DC/DC
- SMPS
- AC-DC
- Reverse polarity protection
- Freewheeling
- Blocking

MARKING CODE



ORDERING INFORMATION

PART NUMBER	QTY PER BOX	BOX SIZE
SMAFAB54J	3,000	7inch

MAXIMUM RATING (Ta=25℃)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	40	V
Maximum RMS Voltage	V_{RMS}	28	V
Maximum DC Blocking Voltage	V_{DC}	40	V
Average Output Rectified Current	I_O	5	A
Peak forward surge current with 8.3ms single half sine wave (Note 1, Note 2)	I_{FSM}	150	A
Junction Temperature	T_j	150	℃
Operating Junction Temperature	T_{opr}	-55~150	℃
Storage Temperature	T_{STG}	-55~150	℃

Note 1) Non-repetitive pulse
Note 2) Mounted on a pad dimension 5X5cm to each terminals

THERMAL CHARACTERISTICS (Ta=25℃)

CHARACTERISTIC	SYMBOL	TEST CONDITION	VALUE	UNIT
Thermal Resistance (Note 2)	Rth(j-a)	Junction to Ambient	45	°C/W

Note 2) Mounted on a pad dimension 5X5cm to each terminals

ELECTRICAL CHARACTERISTICS (Ta=25℃)

CHARACTERISTIC	SYMBOL	RATING	MIN.	TYP.	MAX.	UNIT
Forward Voltage	V_F	I_F=5A	-	-	0.52	V
Reverse Leakage Current	I_R	V_R=40V	-	-	150	μA
Total Capacitance	C_T	V_R=4V, f=1MHz	-	500	-	pF

Fig.1 Forward Current Derating Curve

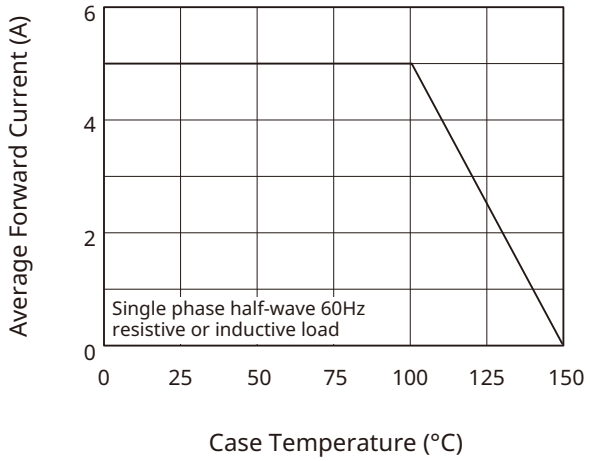


Fig.2 Typical Reverse Characteristics

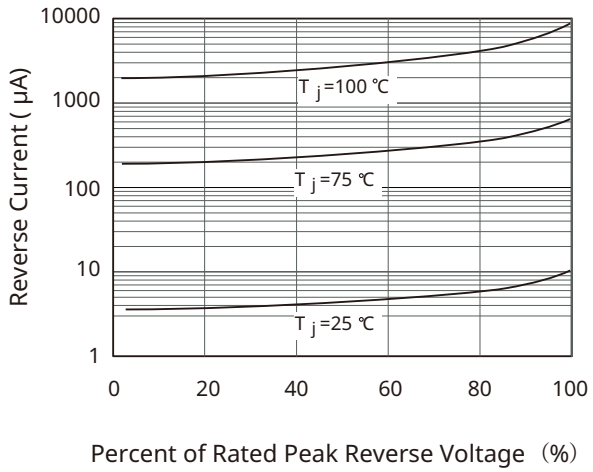


Fig.3 Typical Forward Characteristic

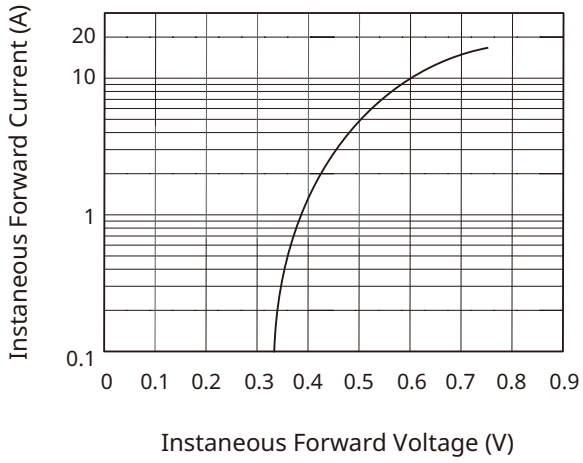


Fig.4 Total Capacitance

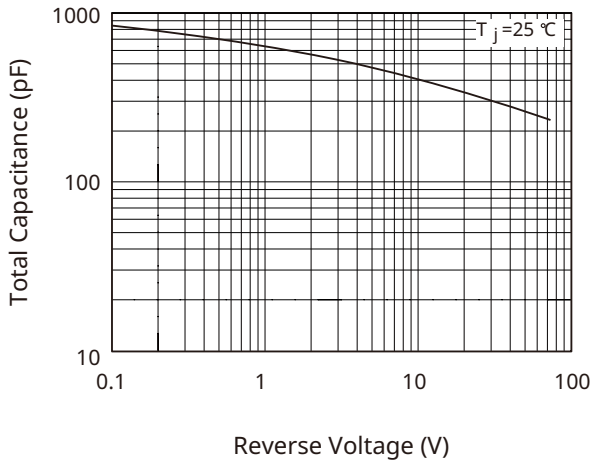


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current

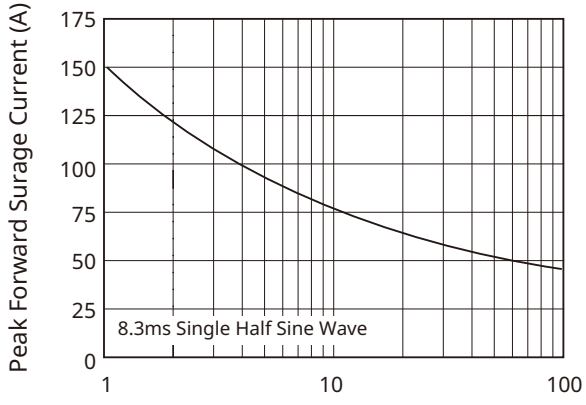
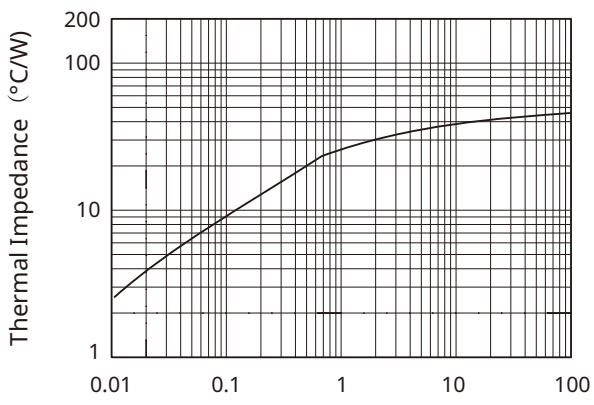
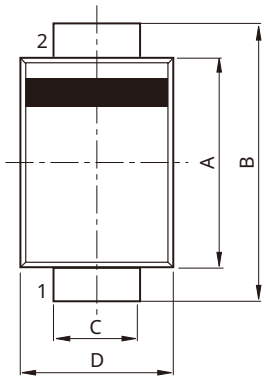
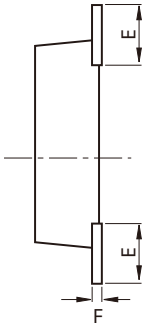


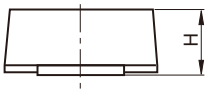
Fig.6 Thermal Impedance



PACKAGE INFORMATION(SMAFA)







1. Anode
2. Cathode

DIM	MILLIMETERS
A	3.5±0.2
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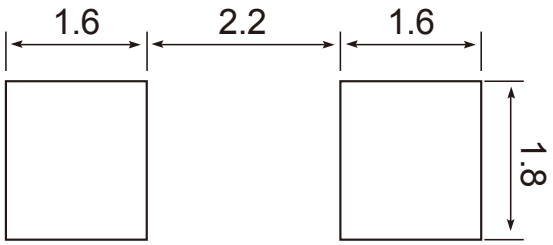
RECOMMENDED PAD DIMENSION

Unit : mm



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1. The products described in this data are intended to be used in general-purpose electronic equipment.
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2. When you intend to use these products with equipment or device which require an extremely high of reliability and special applications (such as automobile, air travel aerospace, transportation equipment, life support, system and safety devices) in which special quality and reliability and the failure or malfunction of products may directly jeopardize or harm the human body or damage to property and any application other than the standard application intended, please be sure to consult with our sales representative in advance.

3. On designing your application, please use product within the ranges guaranteed by KEC for maximum rating, operating supply voltage range, heat radiation characteristics and other characteristics. User shall be responsible for failure or damage when used beyond the guaranteed ranges.

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For additional information,
please contact your local Sales Representative.

SOUTH KOREA (Headquarters)
KEC CORPORATION
PHONE : +82-2-2025-5000
sales@kec.co.kr

JAPAN
KEC JAPAN CO.,LTD.
PHONE : +81-03-5475-2691
kec_jp@kec.co.kr

SINGAPORE
KEC SINGAPORE PTE., LTD.
PHONE : +65-6748-7372(#102)
kec_twn@kec.co.kr

THAILAND
KEC THAILAND BANGKOK OFFICE
PHONE : +66-2-576-1484~5
kec_th@kec.co.kr

CHINA
KEC SHANGHAI CO.,LTD.
PHONE : +86-21-5490-2277
kec_sh@kec.co.kr

KEC SHENZHEN OFFICE
PHONE : +86-755-8882-9198
kec_hk@kec.co.kr

KEC TIANJIN OFFICE
PHONE : + 86-21-5490-2277
kec_sh@kec.co.kr

HONG KONG
KEC HK CORP. LTD
PHONE : +852-2249-3734
kec_hk@kec.co.kr

TAIWAN
KEC TAIWAN CO.,LTD.
PHONE : +886-2-2515-8359
kec_twn@kec.co.kr

U.S.A
KEC AMERICA CORP.
PHONE : +1-714-259-0662
kec_a@kec.co.kr

KECCORP.COM
KEC.CO.KR