

SMCF Plastic-Encapsulate Diodes

Schottky Rectifier Diodes

Features

- $I_{F(AV)}$ 5A
- V_{RRM} 20V-200V
- High surge current capability
- Polarity: Color band denotes cathode

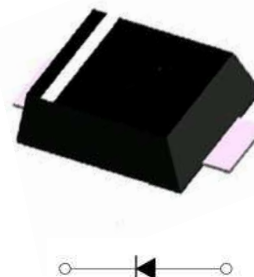
Applications

- Rectifier

Marking

- SS52CF-SS58CF:SS52CF-SS58CF
SS510CF-SS520CF:S510CF-S520CF

SMCF



Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	KSS5								
				2CF	3CF	4CF	5CF	6CF	8CF	10CF	15CF	20CF
Repetitive Peak Reverse Voltage	V _{RRM}	V		20	30	40	50	60	80	100	150	200
Maximum RMS Voltage	V _{RMS}	V		14	21	28	35	42	56	70	105	140
Average Forward Current	I _{F(AV)}	A	60Hz Half-sine wave , Resistance load	5.0								
Surge(Non-repetitive)Forward Current	I _{FSM}	A	60Hz Half-sine wave , 1 cycle, Ta=25℃	150								
Junction Temperature	T _J	℃		-55 ~ +150								
Storage Temperature	T _{STG}	℃		-55 ~ +150								

Electrical Characteristics ($T = 25^{\circ}\text{C}$ Unless otherwise specified)

Item	Symbol	Unit	Test Condition		KSS5							
					2CF	3CF	4CF	5CF	6CF	8CF	10CF	15CF
Peak Forward Voltage	V _F	V	I _F =5.0A		0.55		0.70		0.85		0.95	
Peak Reverse Current	I _{RRM1}	mA	V _{RM} =V _{RRM}	T _a =25°C	0.5			0.1				
	T _a =100°C			10			5					
Thermal Resistance(Typical)	R _{θJ-A}	°C/ W	Between junction and ambient		52.5							
	Between junction and terminal		16									
Juction Capacitance (Typical)	Cj	pF	Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C		260		220		130		100	80

Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on FR4 PCB double sided copper mini pad

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

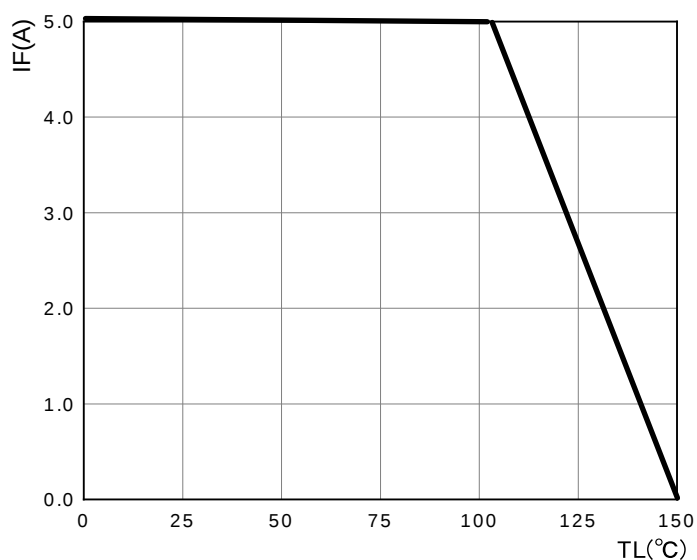
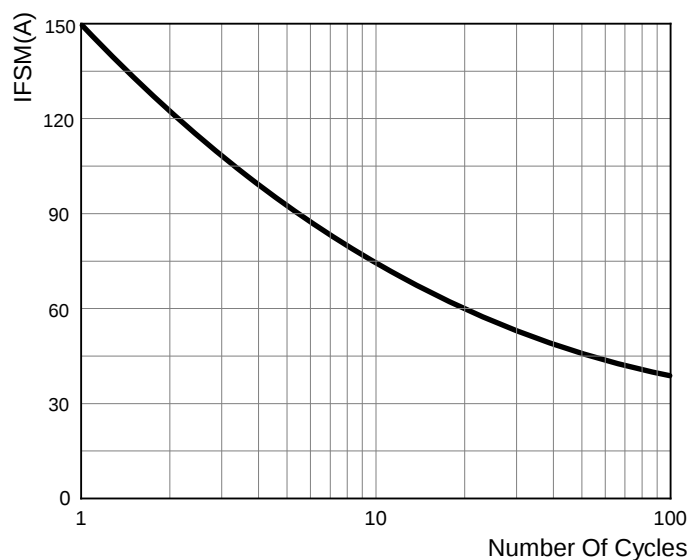
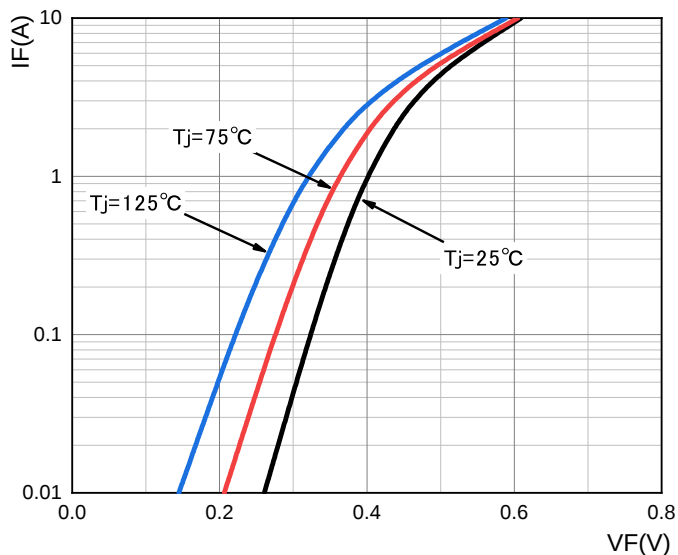


FIG.2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



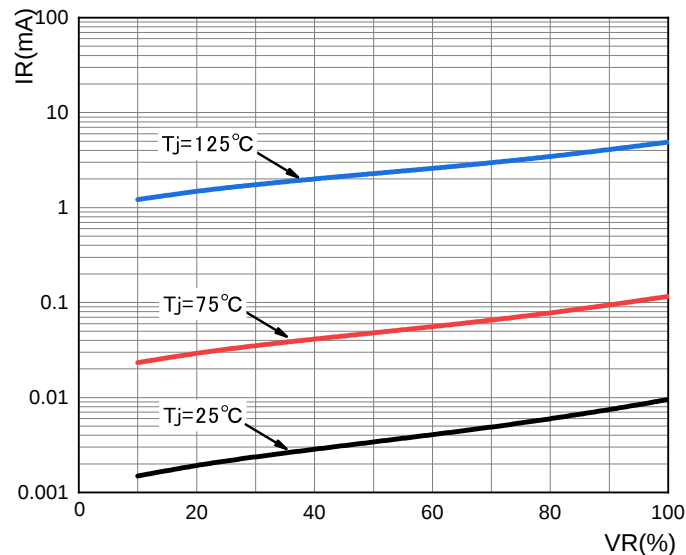
KSS52CF-KSS54CF

FIG.3: TYPICAL FORWARD CHARACTERISTICS



KSS52CF-KSS54CF

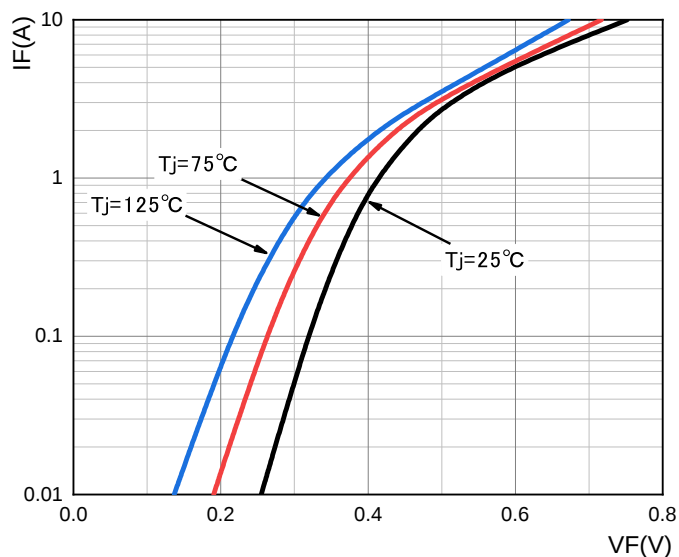
FIG.4: TYPICAL REVERSE CHARACTERISTICS



Typical Characteristics

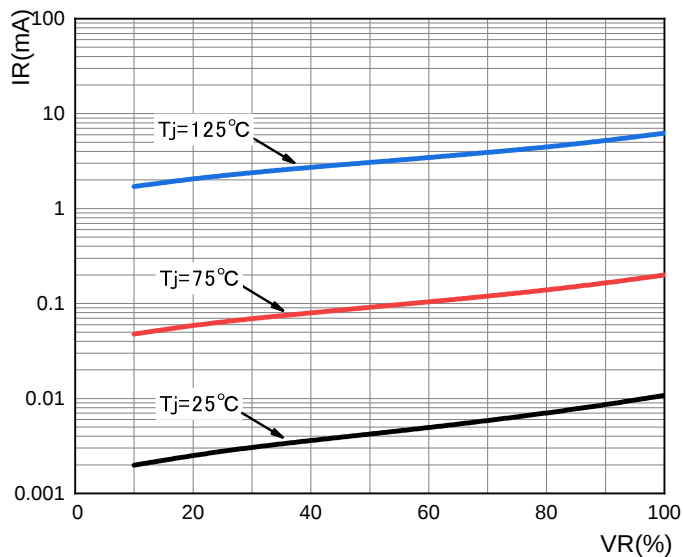
KSS55CF-KSS56CF

FIG.5: TYPICAL FORWARD CHARACTERISTICS



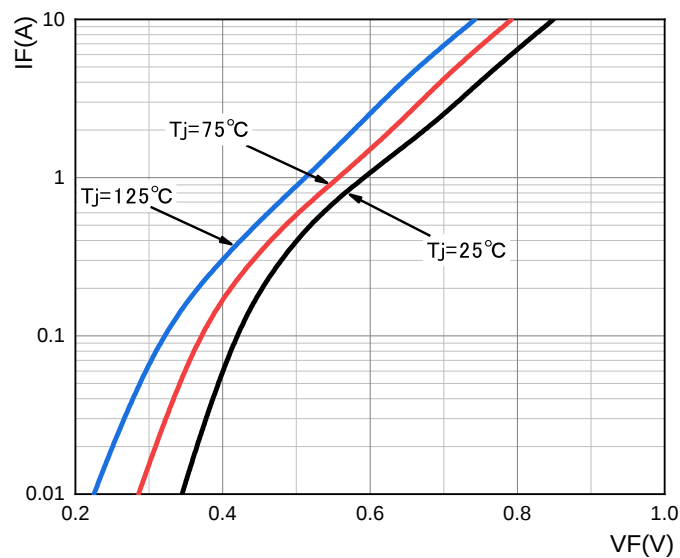
KSS55CF-KSS56CF

FIG.6: TYPICAL REVERSE CHARACTERISTICS



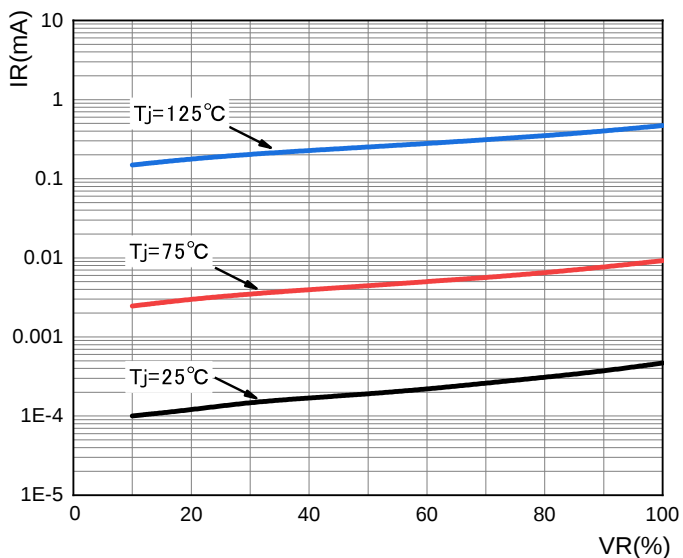
KSS58CF-KSS510CF

FIG.7: TYPICAL FORWARD CHARACTERISTICS



KSS58CF-KSS510CF

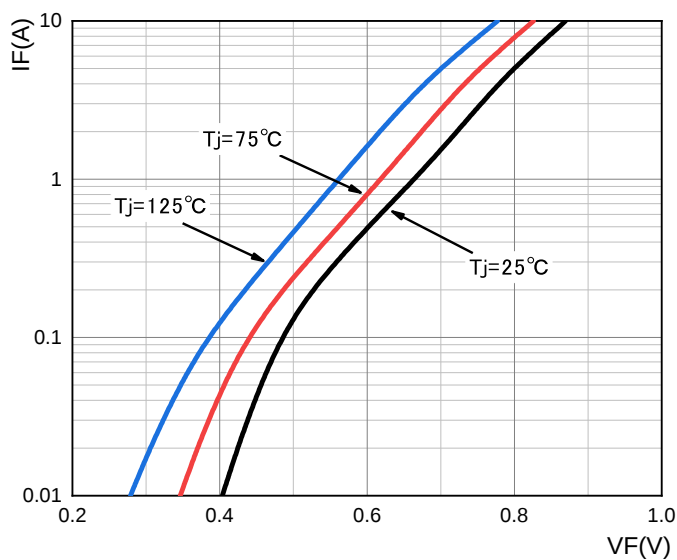
FIG.8: TYPICAL REVERSE CHARACTERISTICS



Typical Characteristics

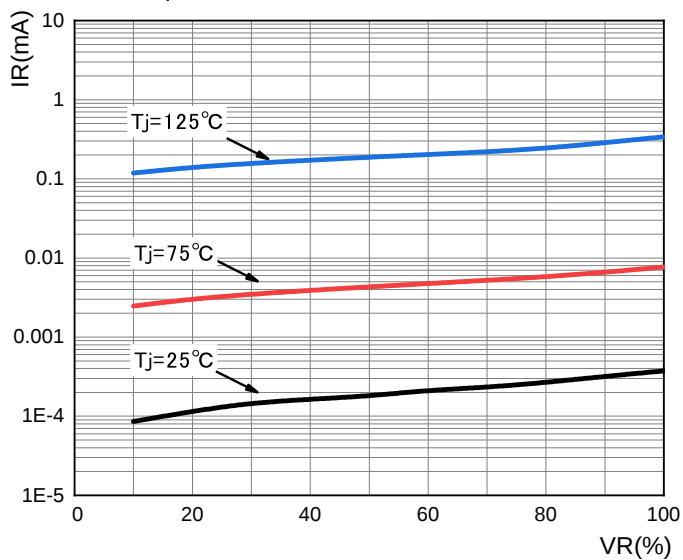
KSS515CF

FIG.9: TYPICAL FORWARD CHARACTERISTICS



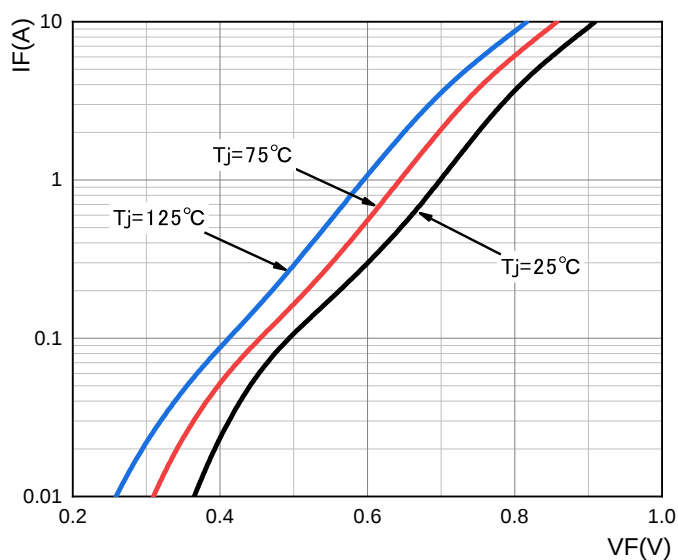
KSS515CF

FIG.10: TYPICAL REVERSE CHARACTERISTICS



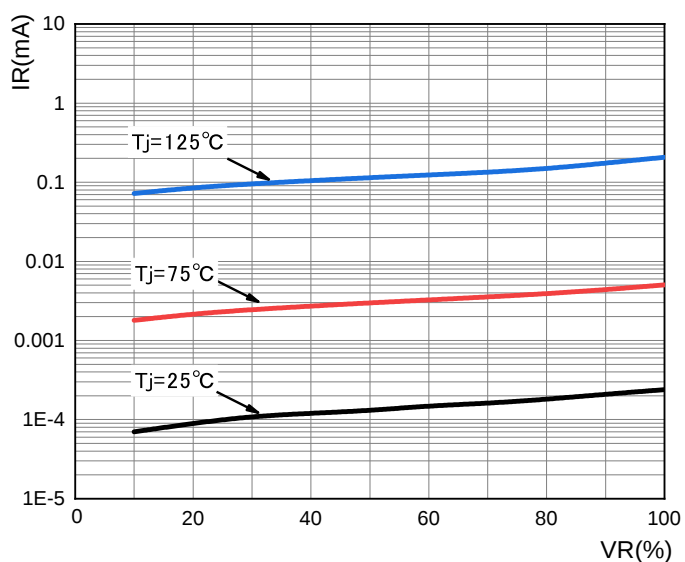
KSS520CF

FIG.11: TYPICAL FORWARD CHARACTERISTICS

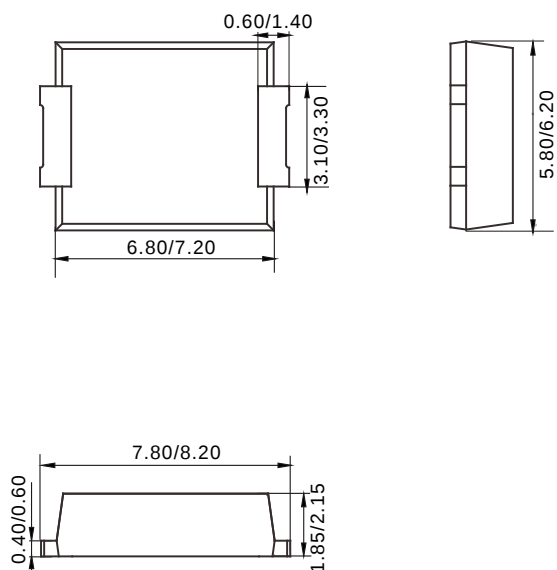


KSS520CF

FIG.12: TYPICAL REVERSE CHARACTERISTICS

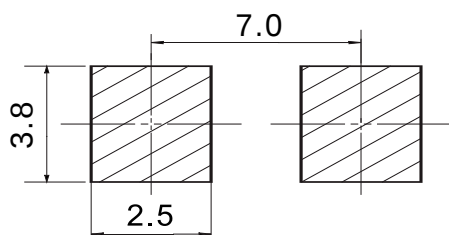


SMCF Package Outline Dimensions



Dimensions in millimeters

SMCF Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.