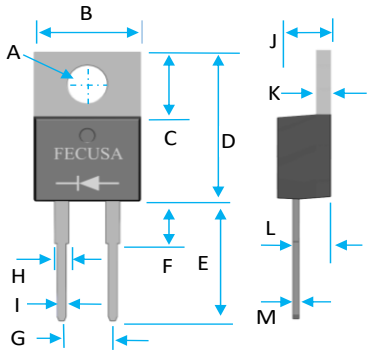
FTSC100122AA SPECIFICATIONS

Rev. 02

10A 1200V SILICON CARBIDE SCHOTTKY BARRIER RECTIFIER



Dim.	Value In[mm] Min.	Max.
A	0.147[3.73]	0.156[3.96]
B	0.387[9.83]	0.419[10.64]
C	0.226[5.74]	0.269[6.83]
D	0.548[13.92]	0.624[15.85]
E	0.500[12.70]	---
F	---	0.177[4.50]
G	0.195[4.95]	0.205[5.21]
H	0.042[1.07]	0.058[1.47]
I	0.019[.48]	0.038[.97]
J	0.163[4.14]	0.196[4.98]
K	0.045[1.14]	0.054[1.37]
L	0.098[2.49]	0.114[2.90]
M	---	0.025[.64]

PRODUCT FEATURES

1. HIGH SURGE CURRENT CAPABILITY
2. POSITIVE TEMPERATURE COEFFICIENT ON VF
3. LOW CONDUCTION LOSS
4. ZERO REVERSE RECOVERY
5. HIGH JUNCTION TEMPERATURE 175 °C
6. RoHS COMPLIANT AND HALOGEN FREE
7. GREEN MOLDING COMPOUND AS PER IEC 61258
8. CASE: MOLDED PLASTIC TO-220AC
9. SOLDERABILITY PER MIL-STD-750, METHOD 2026
10. APPROX. WEIGHT: 0.067 OUNCES, 1.89 GRAMS
11. DIMENSIONS IN INCHES AND (MILLIMETERS)
12. POLARITY: AS MARKED

MAXIMUM RATINGS AND THERMAL CHARACTERISTICS (TC = 25°C UNLESS OTHERWISE SPECIFIED)

PARAMETER	TEST CONDITIONS	SYMBOL	VALUE	UNITS
MAX. REPETITIVE PK REV VOLTAGE		VRRM	1200	V
MAX RMS VOLTAGE VRMS		VRMS	840	V
MAX DC BLOCKING VOLTAGE		VDC	1200	V
CONTINUOUS FORWARD CURRENT	TC=155°C	IF	10	A
REPETITIVE PEAK SURGE CURRENT	TC=25°C , TP =10mS ,HALF SINE WAVE, D=0.1	IFRM	48	A
	TC=125°C , TP =10mS ,HALF SINE WAVE, D=0.10		40	A
PEAK FORWARD SURGE CURRENT	TC=25°C , TP =10mS,HALF SINE WAVE	IFSM	78	A
	TC=125°C , TP =10mS,HALF SINE WAVE		68	A
	TP =10uS, PULSE		640	A
MAXIMUM POWER DISSIPATION		Ptotal	151.5	W

ELECTRICAL CHARACTERISTICS (TC=25°C UNLESS OTHERWISE SPECIFIED)

PARAMETER	TEST CONDITIONS	SYMBOL	Low Limit	LIMIT	High Limit	UNIT
FWD VOLTAGE	IF= 10 A, TJ=25°C	VF		1.5	1.7	V
	IF= 10 A, TJ=175°C			2		
REV LEAKAGE CURRENT	VR = 1200 V, TJ = 25°C	IR		3	60	uA
	VR = 1200 V, TJ = 175°C			85		

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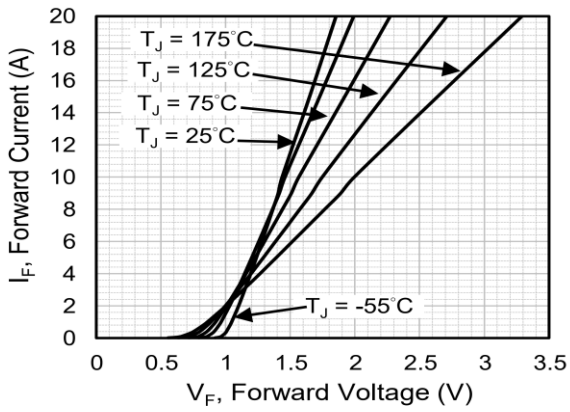
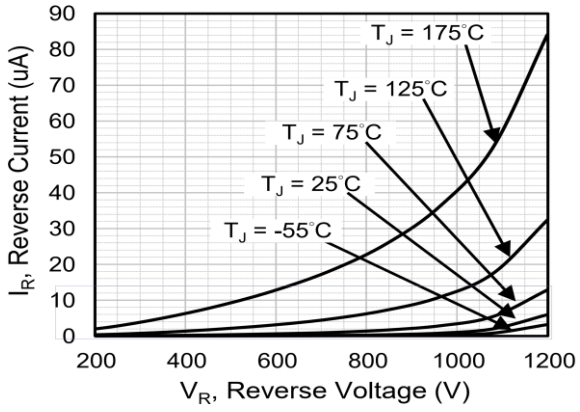
CAPACITIVE CHARGE	IF =10 A, VR =400V	QC		42		nC
CAPACITANCE	VR =1V, f=1MHz	C		529		pF
	VR =400V, f=1MHz			36		
	VR =800V, f=1MHz			25		
Capacitance Stored Energy	VR =800V	Ec		12		uJ
THERMAL RESISTANCE		RθJC		0.99		°C/W

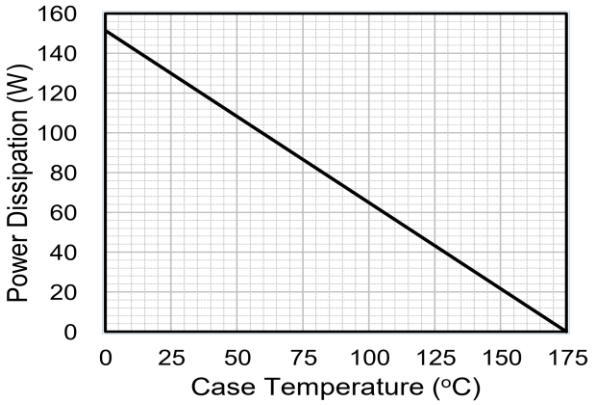
1. STORAGE AND OPERATING TEMPERATURE RANGE: -55 °C TO +175 °C

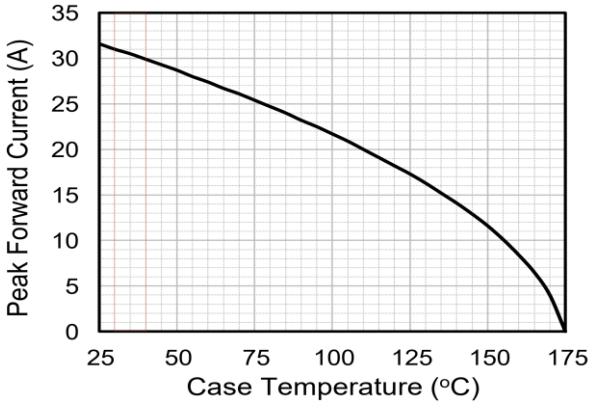
2. STORAGE CONDITIONS RANGE (ORIGINAL PACKAGING): -10 ℃ TO +40 ℃ & 30% TO 70% RH.

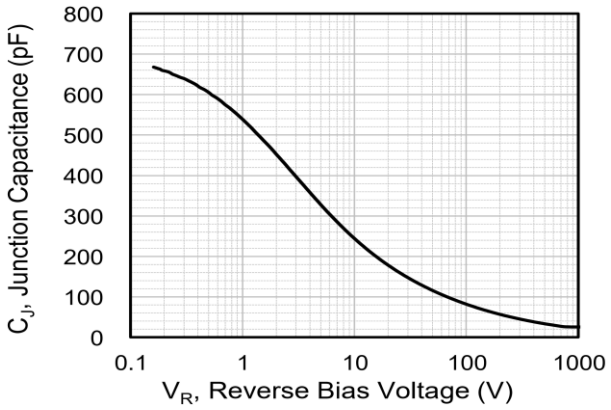
RATING AND CHARACTERISTIC CURVES

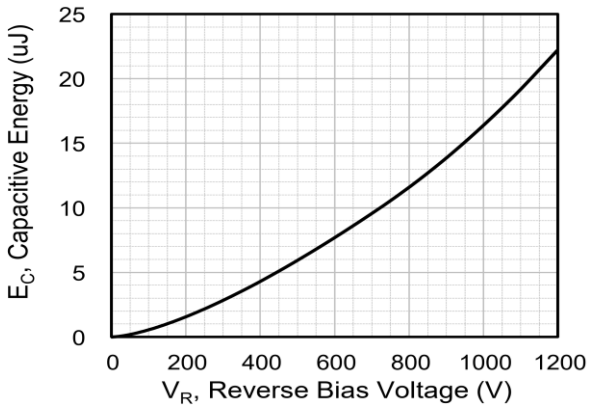









800
700
600
500
400
300
200
100
0
C_j, Junction Capacitance (pF)
0.1
1
10
100
1000
V_R, Reverse Bias Voltage (V)


25
20
15
10
5
0
E_C, Capacitive Energy (uJ)
0
200
400
600
800
1000
1200
V_R, Reverse Bias Voltage (V)