

FDCP25S65

<http://www.fujielectric.com/products/semiconductor/>

FUJI Diode

SiC Schottky Barrier Diode

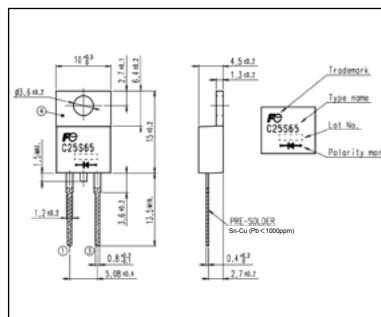
Features

- Ultra Low IR
- Low V_F
- T_J MAX = 175°C
- High reliability at higher temperatures

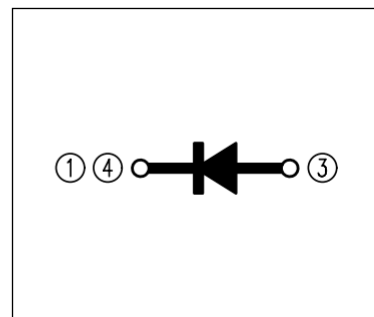
Applications

- High frequency operation
- DC-DC converters
- AC adapter

Outline Drawings [mm]



Connection diagram



Maximum Ratings and Characteristics

Maximum ratings (at $T_a=25^\circ\text{C}$ Unless otherwise specified)

Item	Symbols	Conditions	Ratings	Units
Repetitive peak reverse voltage	V_{RRM}		650	V
Continuous forward current	I_F	$D=1$, $T_c<120^\circ\text{C}$	25	A
Non-repetitive forward surge current	I_{FSM}	Sine wave, 10ms 1shot	100	A
Operating junction temperature	T_J		175	$^\circ\text{C}$
Storage temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

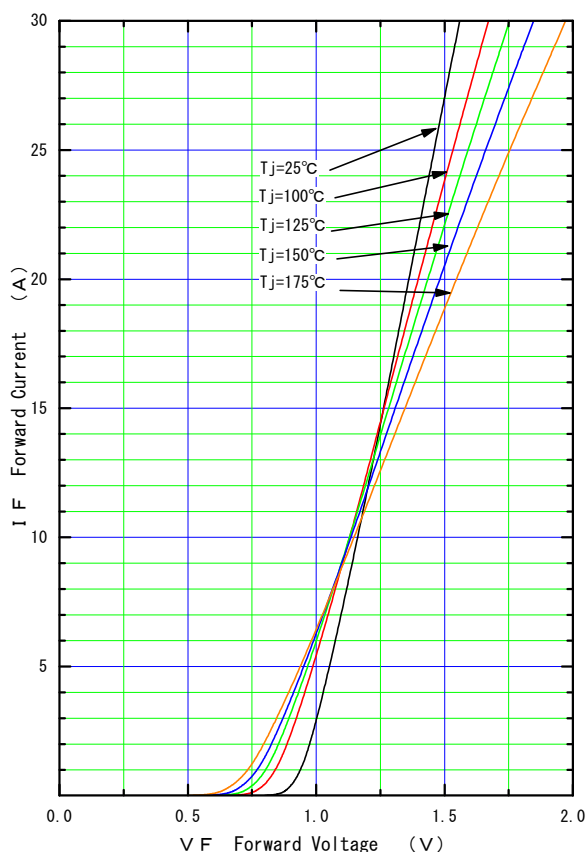
Electrical characteristics (at $T_a=25^\circ\text{C}$ Unless otherwise specified)

Item	Symbols	Conditions	Min.	Max.	Units
Forward voltage	V_F	$I_F = 25\text{A}$	1.40	1.70	V
Reverse current	I_R	$V_R = V_{RRM}$	-	10	μA
Total Capacitive Charge	Q_c	$V_R=170\text{V}$, $I_F=10\text{A}$, $di/dt=100\text{A}/\mu\text{s}$, $T_J=25^\circ\text{C}$	55	75	nC
Switching time	T_c		55	65	ns
Total Capacitance	C	$V_R=0\text{V}$, $T_J=25^\circ\text{C}$, $f=1\text{MHz}$ $V_R=200\text{V}$, $T_J=25^\circ\text{C}$, $f=1\text{MHz}$ $V_R=650\text{V}$, $T_J=25^\circ\text{C}$, $f=1\text{MHz}$	1640 170 115	2050 220 130	pF
Thermal resistance	$R_{th(j-c)}$	Junction to case	-	1.1	$^\circ\text{C}/\text{W}$

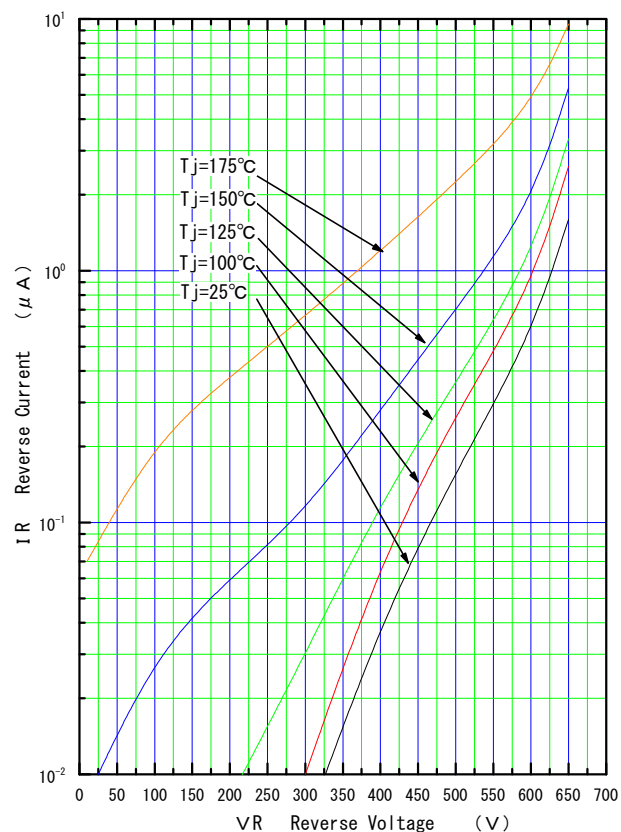
Mechanical characteristics

Item	Conditions	Ratings	Units
Mounting torque	Recommended torque	0.3 to 0.5	N•m
Approximate mass		2.0	g

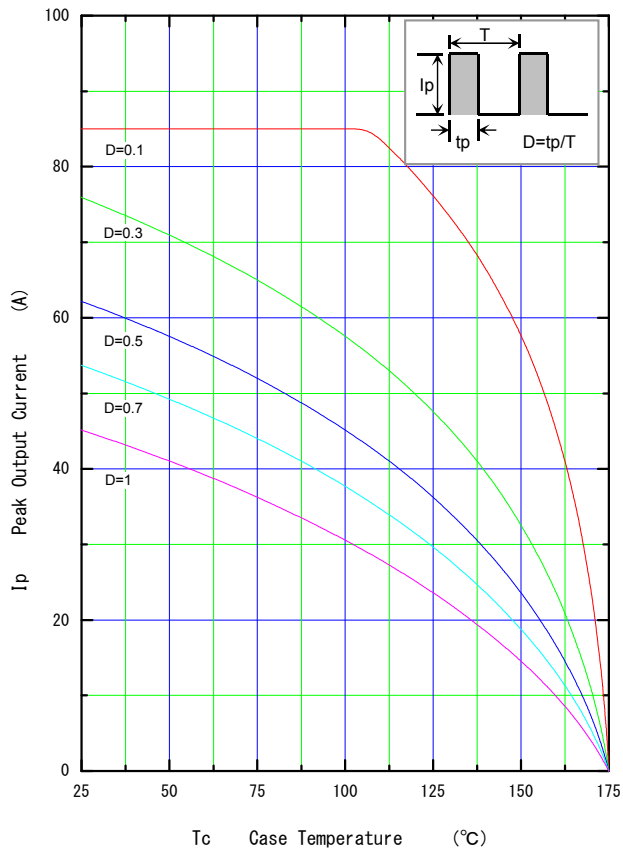
Forward Characteristic (typ.)



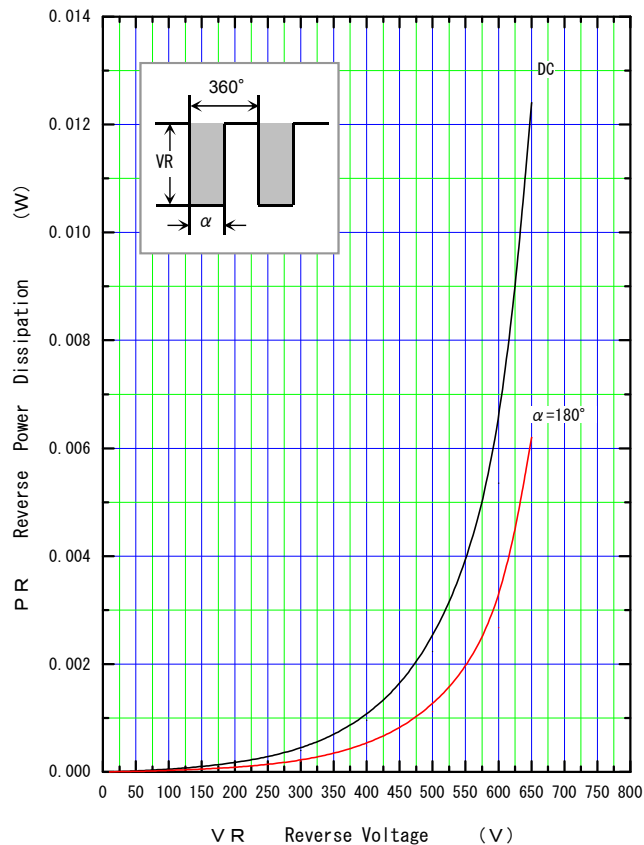
Reverse Characteristic (typ.)

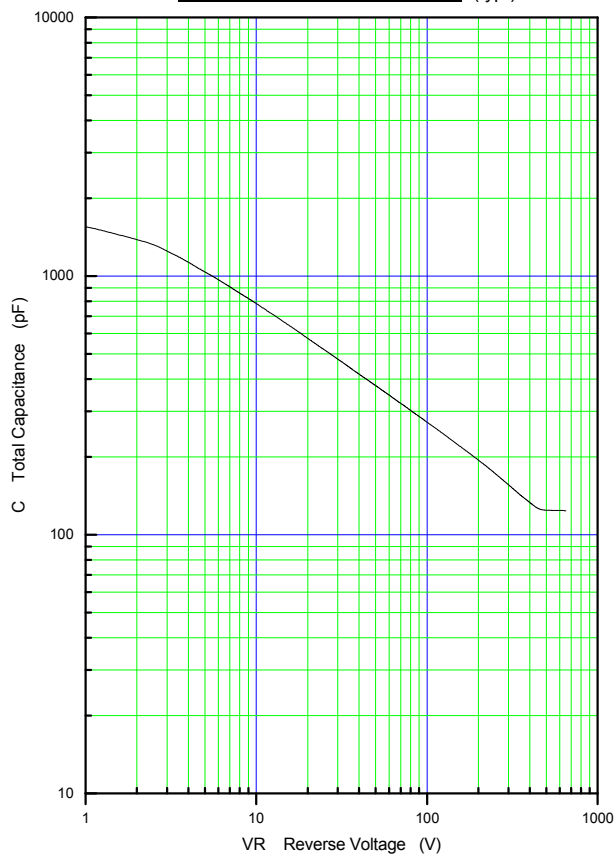
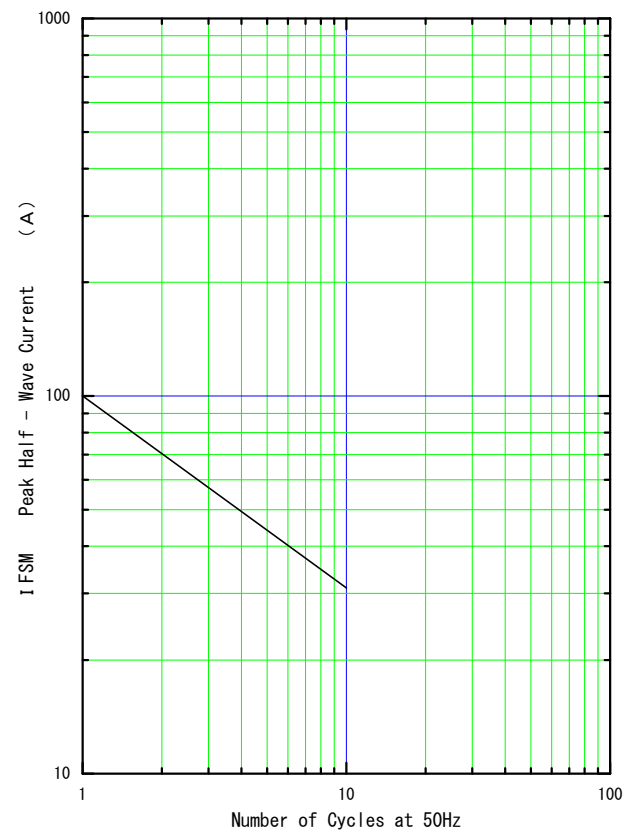
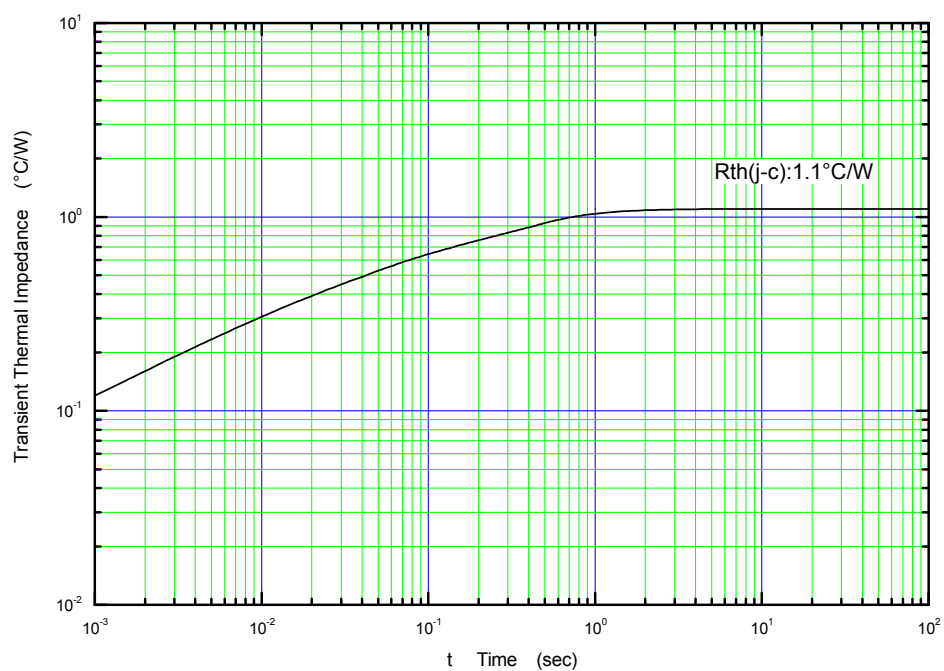


Current Derating (I_p - T_c) (max.)



Reverse Power Dissipation (max.)



Total Capacitance Characteristic (typ.)Surge Capability (max.)Transient Thermal Impedance (max.)

WARNING

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 - Measurement equipment
 - Machine tools
 - Audiovisual equipment
 - Electrical home appliances
 - Personal equipment
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 - Gas leakage detectors with an auto-shut-off feature
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 - Safety devices
 - Medical equipment
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