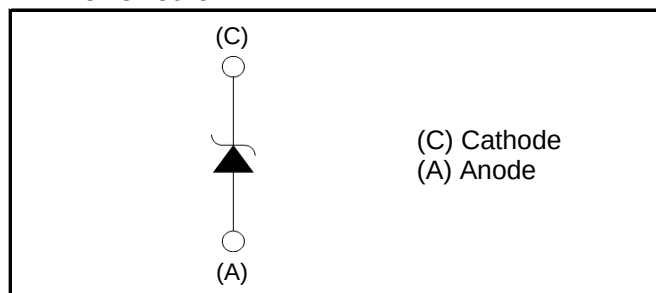


V_R	650V
I_F	12A ^{*1}
Q_C	18nC

●Features

- 1) Shorter recovery time
- 2) Reduced temperature dependence
- 3) High-speed switching possible

●Inner circuit



●Construction

Silicon carbide epitaxial planer type

Schottky diode

●Absolute maximum ratings (Tj = 25°C)

Parameter	Symbol	Value	Unit
Reverse voltage (repetitive peak)	V_{RM}	650	V
Reverse voltage (DC)	V_R	650	V
Continuous forward current	I_F	12 ^{*1}	A
Surge no repetitive forward current	I_{FSM}	45 ^{*2}	A
		170 ^{*3}	A
		36 ^{*4}	A
Repetitive peak forward current	I_{FRM}	49 ^{*5}	A
Junction temperature	Tj	175	°C
Range of storage temperature	Tstg	-55 to +175	°C

*1 Limited by Tj *2 PW=8.3ms sinusoidal, Tj=25°C *3 PW=10μs square, Tj=25°C

*4 PW=8.3ms sinusoidal, Tj=150°C *5 Duty cycle=10%, limited by Tj

●Electrical characteristics (Tj = 25°C)

Parameter	Symbol	Conditions	Values			Unit
			Min.	Typ.	Max.	
DC blocking voltage	V_{DC}	$I_R=0.24mA$	600	-	-	V
Forward voltage	V_F	$I_F=12A, T_j=25^{\circ}C$	-	1.35	1.55	V
		$I_F=12A, T_j=150^{\circ}C$	-	1.55	-	V
		$I_F=12A, T_j=175^{\circ}C$	-	1.63	-	V
Reverse current	I_R	$V_R=600V, T_j=25^{\circ}C$	-	2.4	240	μA
		$V_R=600V, T_j=150^{\circ}C$	-	36	-	μA
		$V_R=600V, T_j=175^{\circ}C$	-	84	-	μA
Total capacitance	C	$V_R=1V, f=1MHz$	-	438	-	pF
		$V_R=600V, f=1MHz$	-	44	-	pF
Total capacitive charge	Qc	$V_R=400V, di/dt=350A/\mu s$	-	18	-	nC
Switching time	tc	$V_R=400V, di/dt=350A/\mu s$	-	16	-	ns

●Electrical characteristic curves

Fig.1 $V_F - I_F$ Characteristics

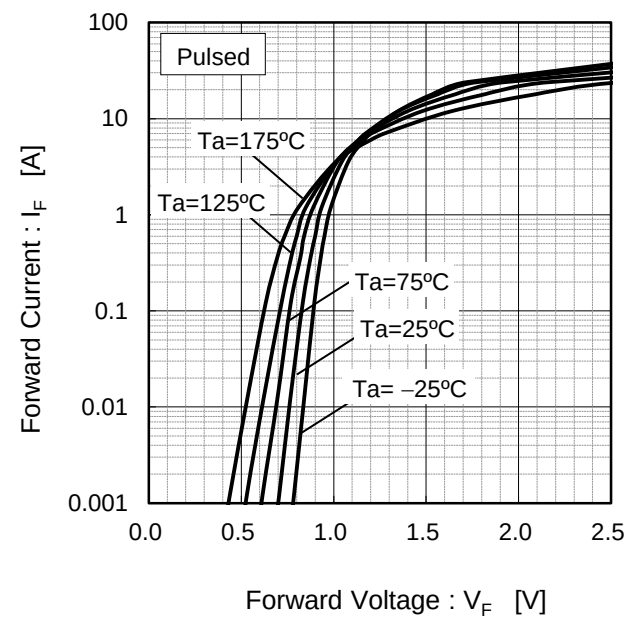


Fig.2 $V_F - I_F$ Characteristics

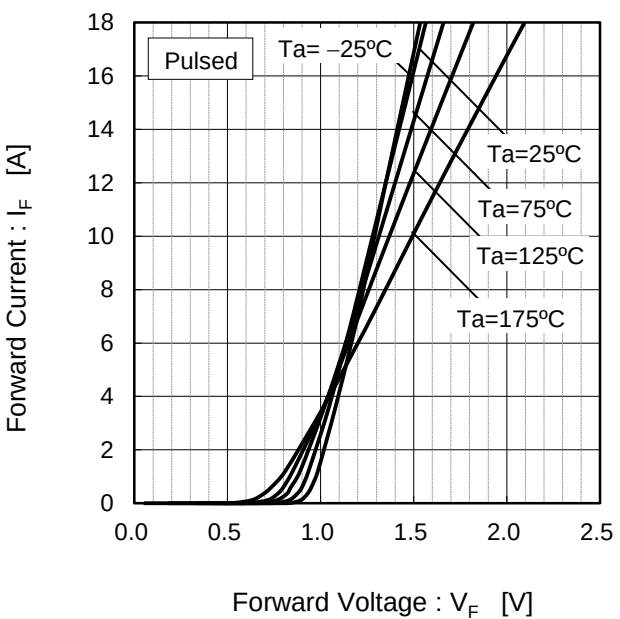


Fig.3 $V_R - I_R$ Characteristics

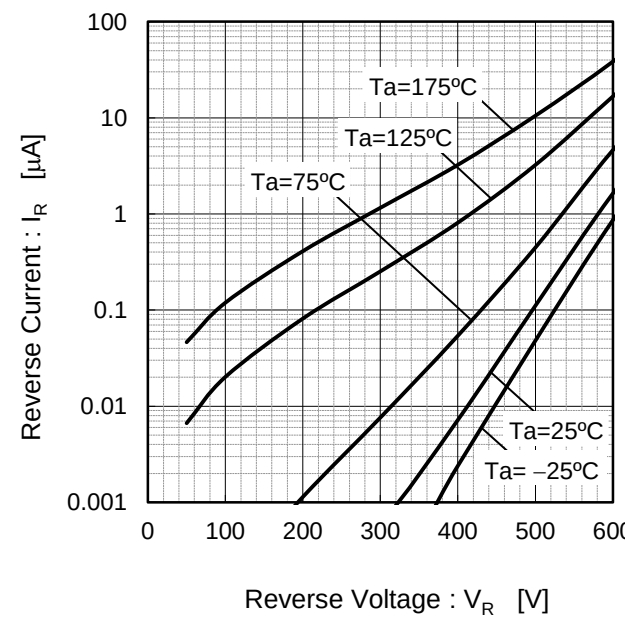
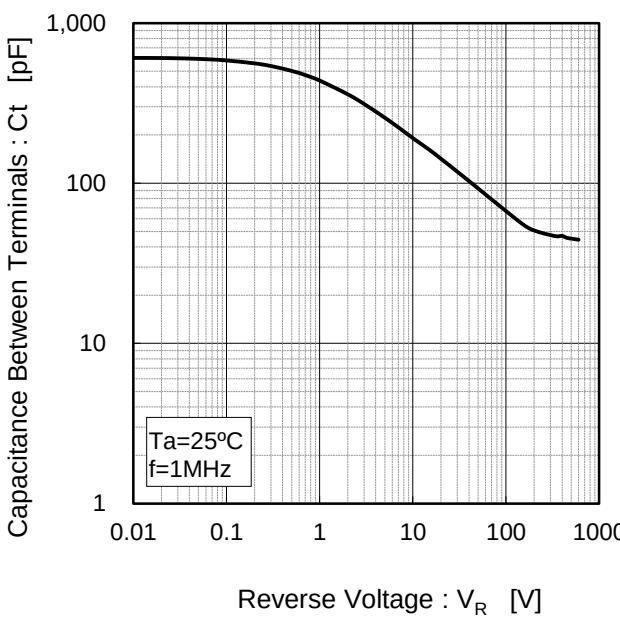


Fig.4 $V_R - C_t$ Characteristics



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