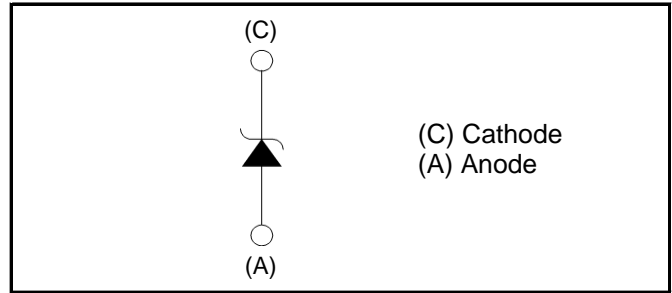


$V_R$	1200V
$I_F$	10A*1
$Q_C$	34nC

●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)	$V_{RM}$	1200	V
Reverse voltage (DC)	$V_R$	1200	V
Continuous forward current	$I_F$	10*1	A
Surge no repetitive forward current	$I_{FSM}$	45*2	A
		190*3	A
		33*4	A
Repetitive peak forward current	$I_{FRM}$	46*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 (T<sub>j</sub> = 25°C)

Parameter	Symbol	Conditions	Values			Unit
			Min.	Typ.	Max.	
DC blocking voltage	V <sub>DC</sub>	I <sub>R</sub> =0.2mA	1200	-	-	V
Forward voltage	V <sub>F</sub>	I <sub>F</sub> =10A, T <sub>j</sub> =25°C	-	1.4	1.6	V
		I <sub>F</sub> =10A, T <sub>j</sub> =150°C	-	1.8	-	V
		I <sub>F</sub> =10A, T <sub>j</sub> =175°C	-	1.9	-	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> =1200V, T <sub>j</sub> =25°C	-	10	200	μA
		V <sub>R</sub> =1200V, T <sub>j</sub> =150°C	-	80	-	μA
		V <sub>R</sub> =1200V, T <sub>j</sub> =175°C	-	130	-	μA
Total capacitance	C	V <sub>R</sub> =1V, f=1MHz	-	550	-	pF
		V <sub>R</sub> =800V, f=1MHz	-	42	-	pF
Total capacitive charge	Q <sub>C</sub>	V <sub>R</sub> =800V, di/dt=500A/μs	-	34	-	nC
Switching time	t <sub>c</sub>	V <sub>R</sub> =800V, di/dt=500A/μs	-	15	-	ns

●Electrical characteristic curves

Fig.1  $V_F - I_F$  Characteristics

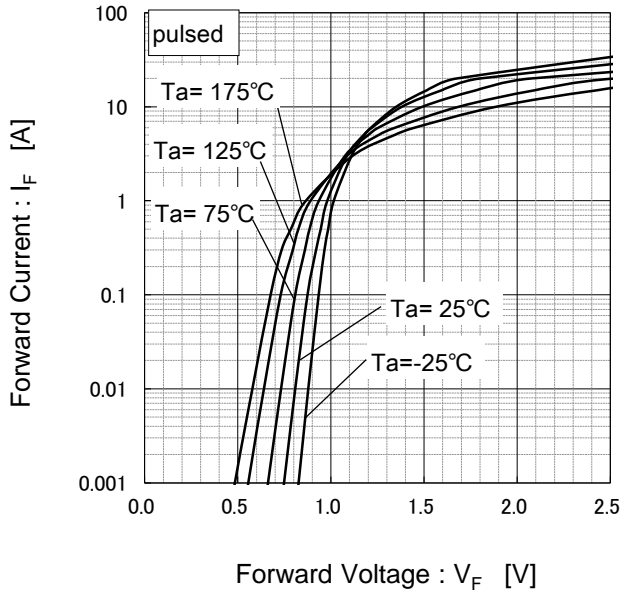


Fig.2  $V_F - I_F$  Characteristics

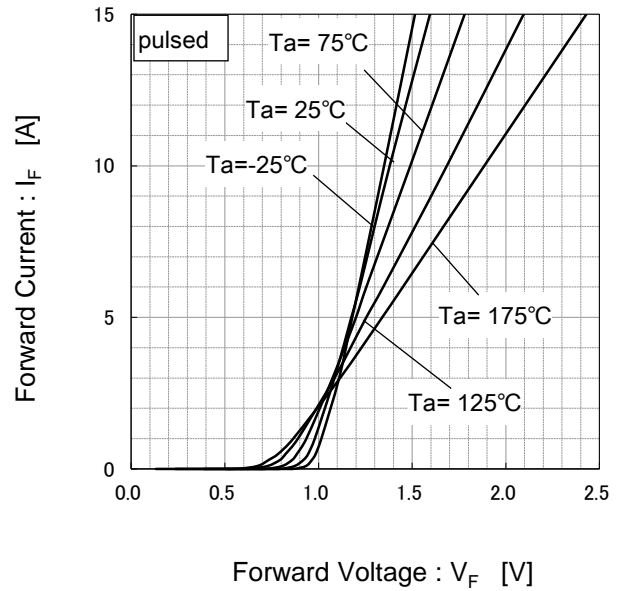


Fig.3  $V_R - I_R$  Characteristics

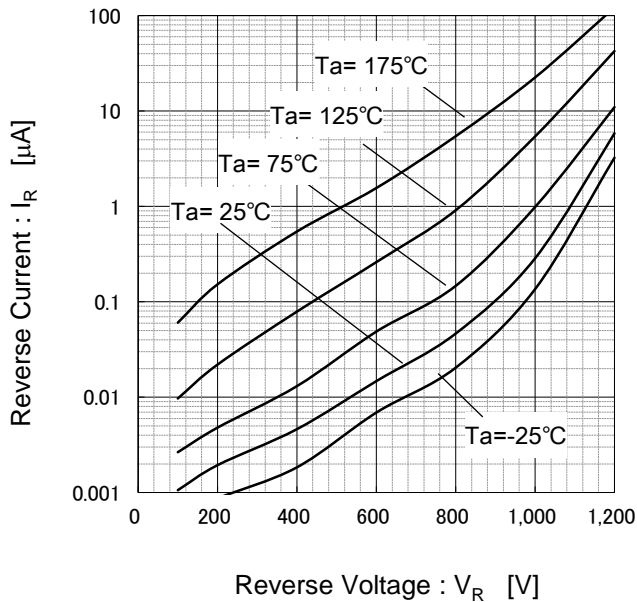
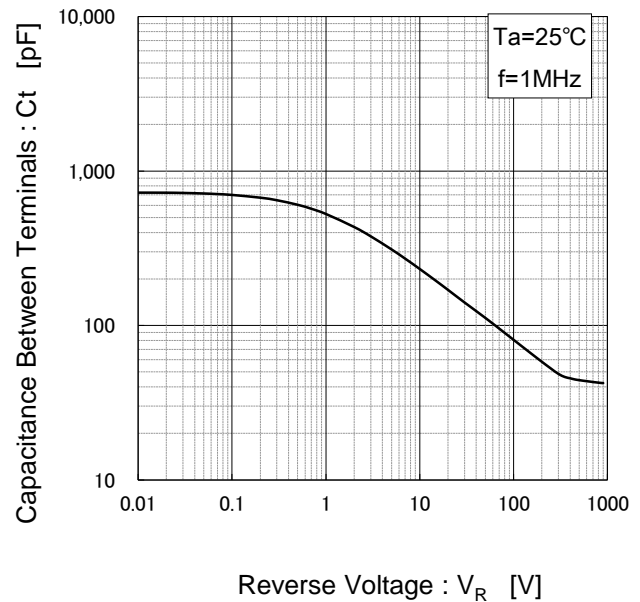


Fig.4  $V_R - C_t$  Characteristics



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