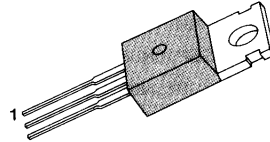


HIGH VOLTAGE POWER SWITCH SWITCHING APPLICATION

ABSOLUTE MAXIMUM RATINGS

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	800	V
Collector-Emitter Voltage	V_{CEO}	400	V
Emitter-Base Voltage	V_{EBO}	7	V
Collector Current (DC)	I_C	5	A
Collector Current (Pulse)	I_C	10	A
Base Current	I_B	3	A
Collector Dissipation ($T_C=25^{\circ}\text{C}$)	P_C	70	W
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-65 ~ 150	$^{\circ}\text{C}$

TO-220



1.Base 2.Collector 3.Emitter

ELECTRICAL CHARACTERISTICS ($T_C=25^{\circ}\text{C}$)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C = 1\text{mA}, I_E = 0$	800			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C = 5\text{mA}, I_B = 0$	400			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_C = 1\text{mA}, I_C = 0$	7			V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 500\text{V}, I_E = 0$			10	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 7\text{V}, I_C = 0$			10	μA
* DC Current Gain	h_{FE}	$V_{CE} = 5\text{V}, I_C = 0.3\text{A}$	10			
* Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 2.5\text{A}, I_B = 0.5\text{A}$			1.5	V
* Base Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 2.5\text{A}, I_B = 0.5\text{A}$			2.0	V
Current Gain Bandwidth Product	f_T	$V_{CE} = 5\text{V}, I_C = 0.1\text{A}$		10		MHz
Output Capacitance	C_{OB}	$V_{CB} = 10\text{V}, f = 1\text{MHz}$		40		pF
Turn On Time	t_{ON}	$I_{B1} = -I_{B2} = 0.5\text{A}$			1	μs
Storage Time	t_{STG}	$I_C = 2.5\text{A}$			3	μs
Fall Time	t_F	$V_{CC} = 150\text{V}$			0.8	μs

* Plus test : PW=300 μs , Duty Cycle=2% Pulsed

KSC5039

NPN SILICON TRANSISTOR



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