

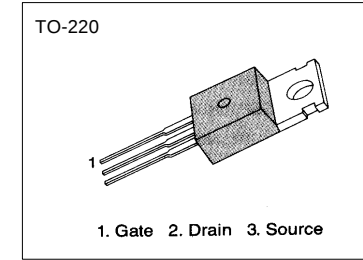
NPN TRIPLE DIFFUSED KSC5328 PLANAR SILICON TRANSISTOR

HIGH VOLTAGE POWER SWITCH SWITCHING APPLICATION

- High Speed Switching
- Wide SOA
- High Collector-Base Voltage

ABSOLUTE MAXIMUM RATINGS

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	1200	V
Collector-Emitter Voltage	V_{CEO}	800	V
Emitter-Base Voltage	V_{EBO}	7	V
Collector Current (DC)	I_C	5	A
Collector Current (Pulse)	I_{CP}	15	A
Base Current (DC)	I_B	2.5	A
Base Current (Pulse)	I_{BP}	7.5	A
Collector Dissipation	P_C	80	W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-65 ~ 150	°C



*Pulse Test: Pulse Width=100ms, Duty Cycle≤10%

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

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Base Breakdown Voltage	BV_{CBO}	$I_C = 1\text{mA}, I_E = 0$	1200			V
Collector Emitter Breakdown Voltage	BV_{CEO}	$I_C = 5\text{mA}, I_B = 0$	800			V
Emitter Base Breakdown Voltage	BV_{EEO}	$I_E = 1\text{mA}, I_C = 0$	7			V
Collector Cut off Current	I_{CBO}	$V_{CB} = 800\text{V}, I_E = 0$			10	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 5\text{V}, I_C = 0$			10	μA
DC Current Gain	h_{FE1}	$V_{CE} = 5\text{V}, I_C = 0.3\text{A}$	10		40	
	h_{FE2}	$V_{CE} = 5\text{V}, I_C = 1.0\text{A}$	8			
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 1.2\text{mA}, I_B = 250\text{mA}$			2.0	V
Base Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 1.2\text{mA}, I_B = 250\text{mA}$			1.5	V
		$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$				
Output Capacitance	C_{OB}	$V_{CC} = 400\text{V},$				pF
Turn On Time	t_{ON}	$I_C = 3\text{A} = 5I_{B1} = -2.5 \cdot I_{B2}$		70	0.5	μs
Storage Time	t_{STG}	$R_L = 133\Omega$			2.0	μs
Fall Time	t_F				0.25	μs

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.56	°C/W

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