

KSC5030

NPN SILICON TRANSISTOR

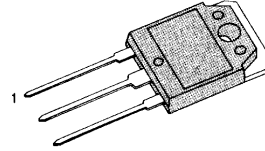
HIGH VOLTAGE AND HIGH RELIABILITY

HIGH SPEED SWITCHING
WIDE SOA

ABSOLUTE MAXIMUM RATINGS

Characteristic	Symbol	Rating	Unit
Collector- Base Voltage	V_{CBO}	1100	V
Collector- Emitter Voltage	V_{CEO}	800	V
Emitter- Base Voltage	V_{EBO}	7	V
Collector Current (DC)	I_C	6	A
Collector Current (Pulse)	I_C	20	A
Base Current	I_B	3	A
Collector Dissipation ($T_C=25^\circ\text{C}$)	P_C	100	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~ 150	$^\circ\text{C}$

TO-3P



1.Base 2.Collector 3.Emitter

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

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Base Breakdown Voltage	BV_{CBO}	$I_C = 1\text{mA}, I_E = 0$	1100			V
Collector Emitter Breakdown Voltage	BV_{CEO}	$I_C = 5\text{mA}, R_{BE} = \infty$	800			V
Emitter Base Breakdown Voltage	BV_{EBO}	$I_E = 1\text{mA}, I_C = 0$	7			V
Collector Emitter Sustaining Voltage	$V_{CEX(sus)}$	$I_C = 3\text{A}, I_B = 0.6\text{A}$ $L = 2\text{mH}$, Clamped	800			V
Collector Cutoff 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}	$V_{CE} = 5\text{V}, I_C = 0.4\text{A}$	10		40	
	h_{FE2}	$V_{CE} = 5\text{V}, I_C = 2\text{A}$	8			
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 3\text{A}, I_B = 0.6\text{A}$			2	V
Base Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 3\text{A}, I_B = 0.6\text{A}$			1.5	V
Output Capacitance	C_{OB}	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$		120		pF
Current Gain Bandwidth Product	f_T	$V_{CE} = 10\text{V}, I_C = 0.4\text{A}$		15		MHz
Turn On Time	t_{ON}	$V_{CC} = 400\text{V}$			0.5	μs
Storage Time	t_S	$5I_B = -2.5I_B, 2 = I_C = 4\text{A}$			3	μs
Fall Time	t_F	$R_L = 100\Omega$			0.3	μs

$h_{FE}(1)$ CLASSIFICATION

Classification	N	R	O
$h_{FE} 1$	10 - 20	15 - 30	20 - 40

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