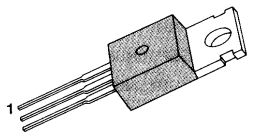
KSC5060 NPN EPITAXIAL SILICON TRANSISTOR

HIGH VOLTAGE AND HIGH RELIABILITY
HIGH SPEED SWITCHING: t_F = 0.1μs
• WIDE SOA

TO-220



1.Base 2.Collector 3.Emitter

ABSOLUTE MAXIMUM RATINGS

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	800	V
Collector-Emitter Voltage	V_{CEO}	500	V
Emitter-Base Voltage	V_{EBO}	7	V
Collector Current (DC)	I_C	3	A
Collector Current (Pulse)	I_C	6	A
Base Current	I_B	1	A
Collector Dissipation (T_C=25°C)	P_C	40	W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-55 ~ 150	°C

ELECTRICAL CHARACTERISTICS (T_C =25°C)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Base Breakdown Voltage	BV_{CBO}	I_C = 1mA, I_E = 0	800			V
Collector Emitter Breakdown Voltage	BV_{CEO}	I_C = 5mA, R_{BE} =∞	500			V
Emitter Base Breakdown Voltage	BV_{EBO}	I_E = 1mA, I_C = 0	7			V
Collector Emitter Sustaining Voltage	V_{CEX}(s)	I_C = 1.5A, I_B1 = -I_B2 = 0.6A L = 2mH, Clamped	500			V
Collector Cutoff Current	I_{CBO}	V_{CB} = 500V, I_E = 0			10	μA
Emitter Cutoff Current	I_{EBO}	V_{EB} = -5V, I_C = 0			10	μA
DC Current Gain	$h_{FE}1$	V_{CE} = 5V, I_C = 0.3A	15		50	
	$h_{FE}2$	V_{CE} = 5V, I_C = 1.5A	8			
Collector Emitter Saturation Voltage	V_{CE}(sat)	I_C = 1.5A, I_B = 0.3A			1	V
Base Emitter Saturation Voltage	V_{BE}(sat)	I_C = 1.5A, I_B = 0.3A			1.5	V
Collector Output Capacitance	C_{OB}	V_{CB} = 10V, f=1MHz		50		pF
Current Gain Bandwidth Product	f_T	V_{CE}=10v, I_C=0.3A		18		MHz
Turn On Time	t_{ON}	V_{CC} = 200V			0.5	μs
Storage Time	t_{STG}	5 • I_B1 = -2.5 • I_B2 = I_C = 2A			3	μs
Fall Time	t_F	R_L = 100Ω			0.3	μs

h_{FE}(1) CLASSIFICATION

Classification	R	O	Y
$h_{FE}1$	15 ~ 30	20 ~ 40	30 ~ 50

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