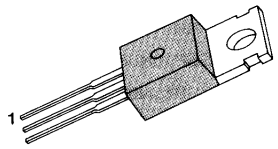
KSC5027 NPN SILICON TRANSISTOR

HIGH VOLTAGE AND HIGH RELIABILITY
HIGH SPEED SWITCHING
WIDE SOA

TO-220



1.Base 2.Collector 3.Emitter

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	3	A
Collector Current (Pulse)	I_C	10	A
Base Current	I_B	1.5	A
Collector Dissipation (T_C=25℃)	P_C	50	W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55 ~ 150	℃

ELECTRICAL CHARACTERISTICS (T_C =25℃)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Base Breakdown Voltage	BV_{CBO}	I_C = 1mA, I_E = 0	1100			V
Collector Emitter Breakdown Voltage	BV_{CEO}	I_C = 5mA, R_{BE} =∞	800			V
Emitter Base Breakdown Voltage	BV_{EBO}	I_E = 1mA, I_C = 0	7			V
Collector Emitter Sustaining Voltage	V_{CEX}(sus)	I_C = 1.5A, I_B1 = -I_B2 = 0.3A L = 2mH, Clamped	800			V
Collector Cutoff Current	I_{CBO}	V_{CB} = 800V, I_E = 0			10	uA
Emitter Cutoff Current	I_{EBO}	V_{EB} = 5V, I_C = 0			10	uA
DC Current Gain	$h_{FE}1$	V_{CE} = 5V, I_C = 0.2A	10		40	
	$h_{FE}2$	V_{CE} = 5V, I_C = 1A	8			
Collector Emitter Saturation Voltage	V_{CE}(sat)	I_C = 1.5A, I_B = 0.3A			2	V
Base Emitter Saturation Voltage	V_{BE}(sat)	I_C = 1.5A, I_B = 0.3A			1.5	V
Output Capacitance	C_{OB}	V_{CB} = 10V, I_E = 0, f = 1MHz		60		pF
Current Gain Bandwidth Product	f_T	V_{CE} = 10V, I_C = 0.2A		15		MHz
Turn On Time	t_{ON}	V_{CC} = 400V			0.5	uS
Storage Time	t_S	5I_B1 = -2.5I_B2 = I_C = 2A			3	uS
Fall Time	t_F	RL = 200Ω			0.3	uS

h_{FE}(1) CLASSIFICATION

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

SAMSUNG ELECTRONICS