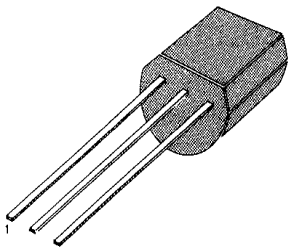
KSP2222A NPN EPITAXIAL SILICON TRANSISTOR

GENERAL PURPOSE TRANSISTOR

- Collector-Emitter Voltage: V_{CEO}= 40V
- Collector Dissipation: P_C(max)=625mW

TO-92



1. Emitter 2. Base 3. Collector

ABSOLUTE MAXIMUM RATINGS (T_A=25℃)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	70	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	600	mA
Collector Dissipation	P_C	625	mW
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55 ~ 150	℃

- Refer KSP2222 for graphs

ELECTRICAL CHARACTERISTICS (T_A=25℃)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=10μA, I_E=0	75			V
Collector Emitter Breakdown Voltage	BV_{CEO}	I_C=10mA, I_B=0	40			V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E=10μA, I_C=0	6			V
Collector Cut-off Current	I_{CBO}	V_{CB}=60V, I_E=0			0.01	μA
Emitter Cut-off Current	I_{EBO}	V_{EB}=3V, I_C=0			10	nA
DC Current Gain	h_{FE}	I_C=0.1mA, V_{CE}=10V	35			
		I_C=1mA, V_{CE}=10V	50			
		I_C=10mA, V_{CE}=10V	75			
		★ I_C=150mA, V_{CE}=10V	100		300	
		★ I_C=500mA, V_{CE}=10V	40			
★ Collector-Emitter Saturation Voltage	V_{CE} (sat)	I_C=150mA, I_B=15mA			0.3	V
		I_C=500mA, I_B=50mA			1	V
★ Base Emitter Saturation Voltage	V_{BE} (sat)	I_C=150mA, I_B=15mA			1.2	V
		I_C=500mA, I_B=50mA			2	V
Current Gain Bandwidth Product	f_T	I_C=20mA, V_{CE}=20V f=100MHz	300			MHz
Output Capacitance	C_{OB}	V_{CB}=10V, I_E=0, f=1MHz			8	pF
Turn On Time	t_{ON}	V_{CC}=30V, I_C=150mA I_{B1}=15mA, V_{BE}(off)=0.5V			35	ns
Turn Off Time	t_{OFF}	V_{CC}=30V, I_C=150mA I_{B1}=I_{B2}=15mA			285	ns
Noise Figure	NF	I_C=100μA, V_{CE}=10V R_S=1kΩ, f=1KHz			4	dB

★ Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2%

SAMSUNG ELECTRONICS