

KSP742C

NPN Silicon Power Transistor, VCBO= 1050V, VCEO= 500V, IC= 4A

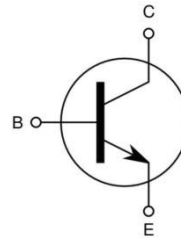
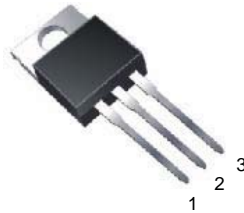
General Description

- High voltage, high speed power switching
- Suitable for switching regulator, inverters, motor controls

Features

- VCBO = 1050V
- VCEO = 500V
- VBEO = 15V
- IC = 4A

TO-220



Ordering Information

Ordering number	Package	Pin Assignment			Packing
		1	2	3	
KSP742C	TO-220	B	C	E	Tube

KSP742C

NPN Silicon Power Transistor, $V_{CBO}= 1050V$, $V_{CEO}= 500V$, $I_C= 4A$

Absolute Maximum Ratings TC=25°C unless otherwise noted

CHARACTERISTICS	SYMBOL	RATING	UNIT
		TO-220	
Collector-Base Voltage	V_{CBO}	1050	V
Collector-Emitter Voltage	V_{CEO}	500	V
Emitter-Base Voltage	V_{EBO}	15	V
Collector Current(DC)	I_C	4	A
Collector Current(Pulse)	I_{CP}	8	A
Base Current	I_B	2	A
Collector Dissipation(Tc=25°C)	P_C	70	W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-65~150	°C

Electrical Characteristics ⁽¹⁾ TC=25°C unless otherwise noted

CHARACTERISTICS	SYMBOL	Test Condition	Min	Typ.	Max	Unit
Collector-Base Breakdown Voltage	V_{CBO}	$I_C=500\mu A, I_E=0$	1050			V
Collector-Emitter Breakdown Voltage	V_{CEO}	$I_C=5mA, I_B=0$	500			V
Emitter-Base Breakdown Voltage	V_{EBO}	$I_E=1mA, I_C=0$	15	19	24	V
Emitter Cut-off Current	I_{EBO}	$V_{EB}=15V, I_C=0$			1	mA
DC Current Gain	h_{FE1} h_{FE2}	$V_{CE}=5V, I_C=0.1A$ $V_{CE}=3V, I_C=0.8A$	48 25	75	100 50	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=1.0A, I_B=0.2A$ $I_C=3.5A, I_B=1.0A$			0.5 1.5	V V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=3.5A, I_B=1.0A$			1.5	V
Output Capacitance	C_{ob}	$V_{CB}=10V, f=0.1MHz$		36		pF
Storage Time	t_{stg}	$I_C=500mA, I_B=10mA$ (UI9600)	2		7	μs

Notes ;

1. Pulse Test: Pulse Width ≤ 300μs, Duty Cycles ≤ 2%

Typical Characteristics

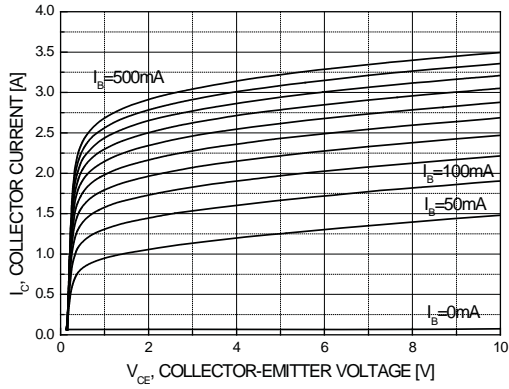


Figure 1. Static Characteristic

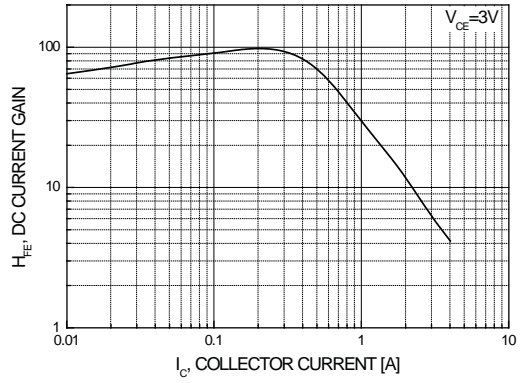


Figure 2. DC Current Gain

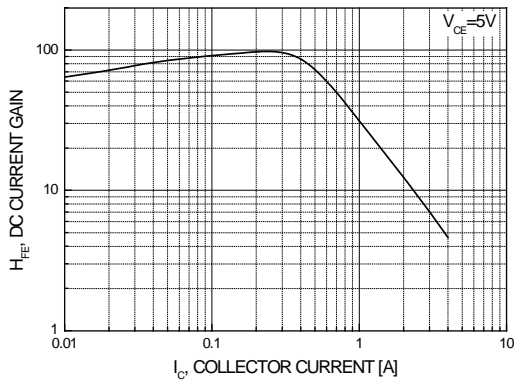


Figure 3. DC Current Gain

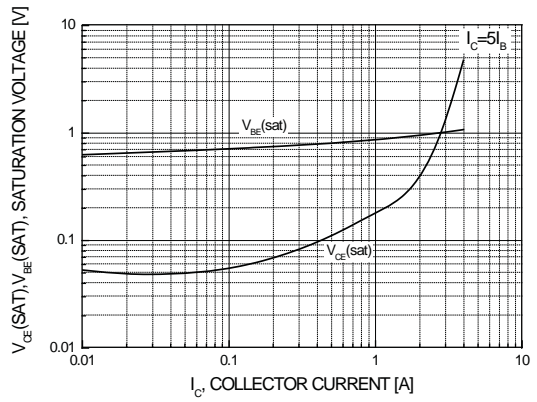


Figure 4. Saturation Voltage

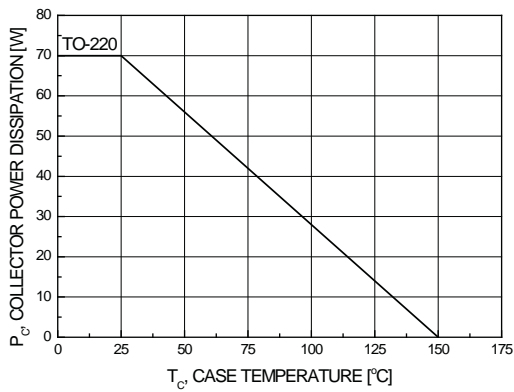
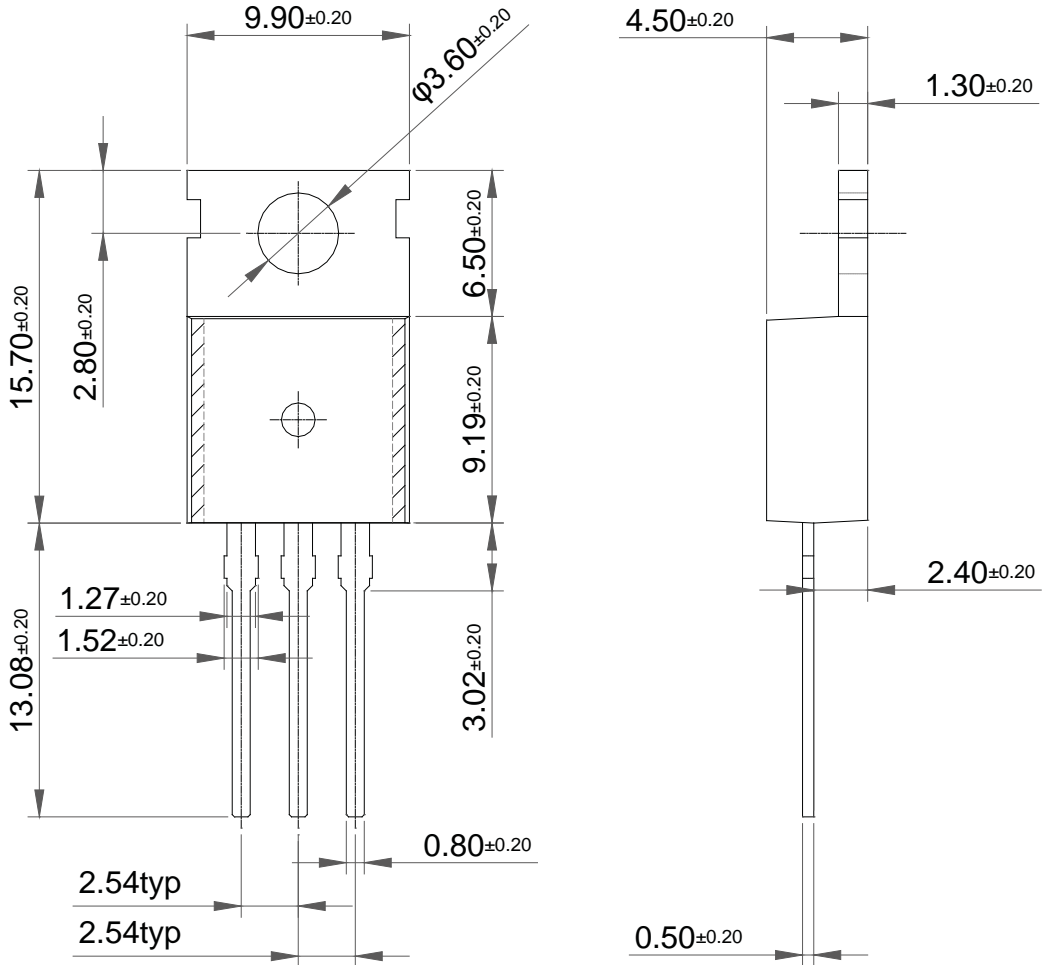


Figure 5. Power Derating

Package Dimension

TO-220



Dimensions in Millimeters