

NPN Silicon Power Transistor, VCBO= 1050V, VCEO= 500V, IC= 2A

General Description

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

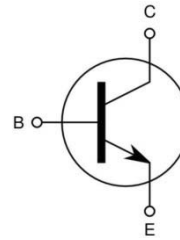
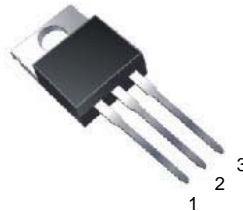
Features

- VCBO = 1050V
- VCEO = 500V
- VBEO = 15V
- IC = 2A

TO-252



TO-220



Ordering Information

Ordering number	Package	Pin Assignment			Packing
		1	2	3	
KSD741	TO-252	B	C	E	Reel
KSP741	TO-220	B	C	E	Tube

NPN Silicon Power Transistor, $V_{CBO}=1050V$, $V_{CEO}=500V$, $I_C=2A$

Absolute Maximum Ratings TC=25°C unless otherwise noted

CHARACTERISTICS	SYMBOL	RATING		UNIT
		TO-252	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	2		A
Collector Current(Pulse)	I_{CP}	4		A
Base Current	I_B	1		A
Collector Dissipation(Tc=25°C)	P_C	30	60	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}	$V_{CE}=5V, I_C=100mA$ $V_{CE}=3V, I_C=450mA$	48 25	70	100 50	
Collector-Emitter Saturation Voltage	$V_{CE}(sat)$	$I_C=0.7A, I_B=0.14A$ $I_C=2.0A, I_B=0.6A$			0.5 3.0	V V
Base-Emitter Saturation Voltage	$V_{BE}(sat)$	$I_C=2.0A, I_B=0.6A$			1.5	V
Output Capacitance	C_{ob}	$V_{CB}=10V, f=0.1MHz$		23		pF
Storage Time	t_{stg}	$I_C=500mA, I_B=10mA$ (UI9600)	2		6	μs

Notes ;

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

Typical Characteristics

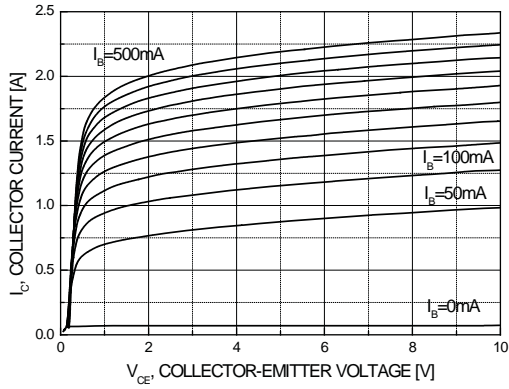


Figure 1. Static Characteristic

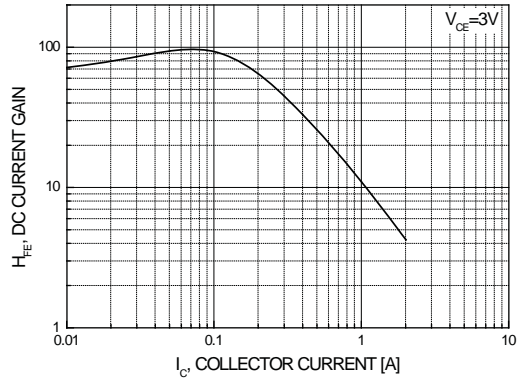


Figure 2. DC Current Gain

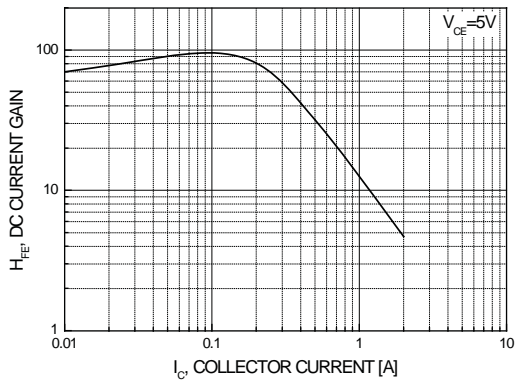


Figure 3. DC Current Gain

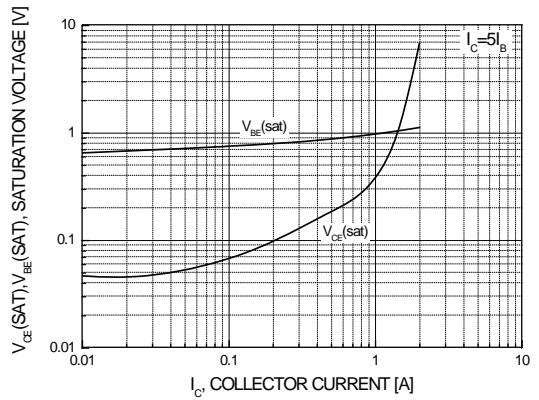


Figure 4. Saturation Voltage

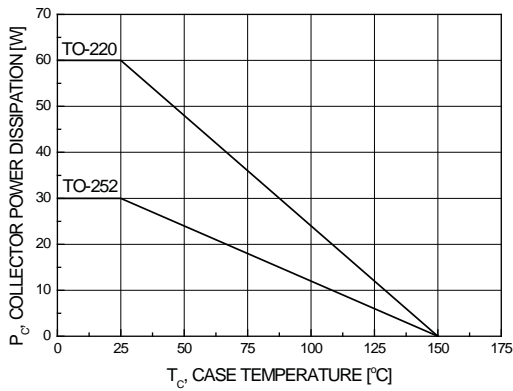
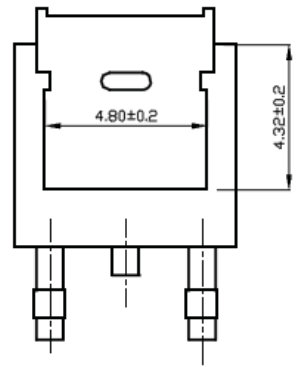
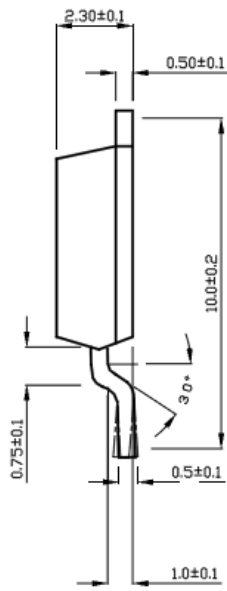
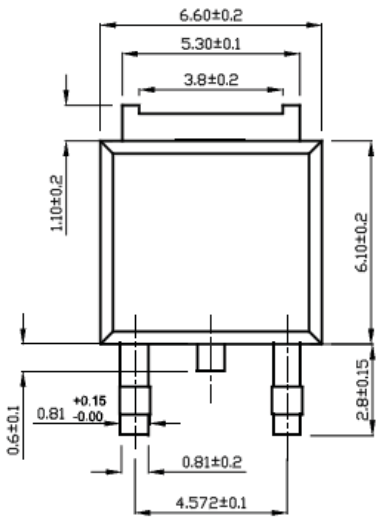


Figure 5. Power Derating

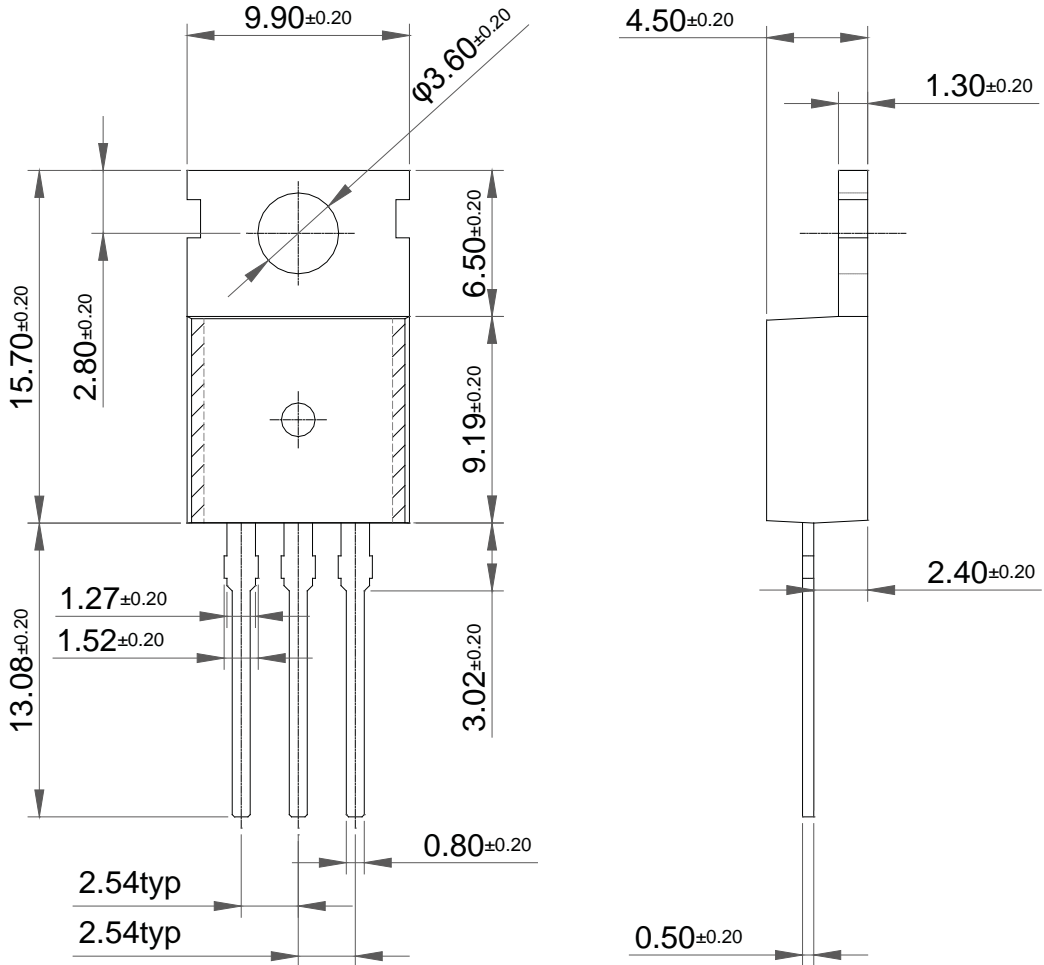
Package Dimension

TO-252



Package Dimension

TO-220



Dimensions in Millimeters