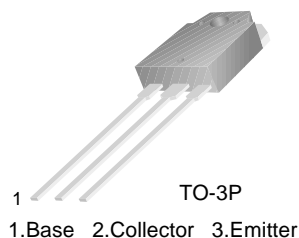


# KSC5047

KSC5047

## Feature

- High Current Gain
- Low Collector Emitter Saturation Voltage



## NPN Epitaxial Silicon Transistor

### Absolute Maximum Ratings $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	100	V
$V_{CEO}$	Collector-Emitter Voltage	50	V
$V_{EBO}$	Emitter-Base Voltage	15	V
$I_C$	Collector Current	15	A
$I_B$	Base Current	4	A
$P_C$	Collector Dissipation ( $T_C=25^\circ\text{C}$ )	100	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature	- 55 ~ 150	$^\circ\text{C}$

### Electrical Characteristics $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C = 50\text{mA}, I_B = 0$	50			V
$I_{CBO}$	Collector Cut-off Current	$V_{CB} = 100\text{V}, I_E = 0$			100	$\mu\text{A}$
$I_{EBO}$	Emitter-Base Breakdown Voltage	$V_{EB} = 15\text{V}, I_C = 0$			100	$\mu\text{A}$
$h_{FE}$	DC Current Gain	$V_{CE} = 5\text{V}, I_C = 5\text{A}$	40			
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 5\text{A}, I_B = 0.12\text{A}$			0.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = 5\text{A}, I_B = 0.12\text{A}$			1.2	V
$t_{ON}$	Turn On Time	$V_{CC} = 20\text{V}, I_C = 5\text{A}$		0.5		$\mu\text{s}$
$t_{STG}$	Storage Time	$I_{B1} = - I_{B2} = 0.12\text{A}$		2.5		$\mu\text{s}$
$t_F$	Fall Time	$R_L = 4\Omega$		0.5		$\mu\text{s}$

# Typical Characteristics

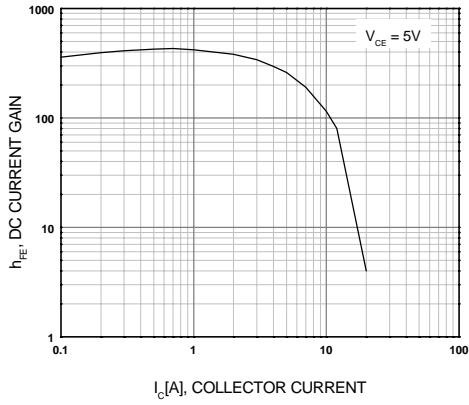


Figure 1. DC current Gain

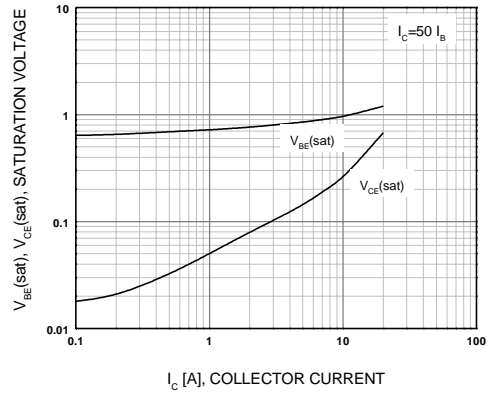


Figure 2. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

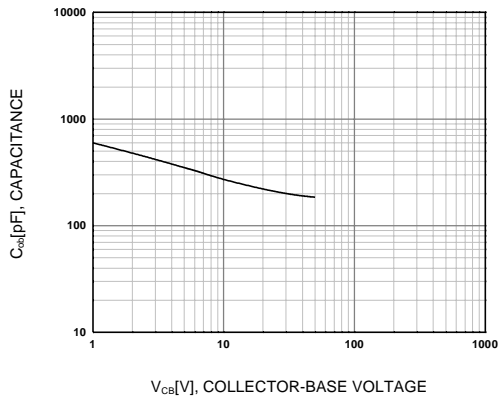


Figure 3. Collector Output Capacitance

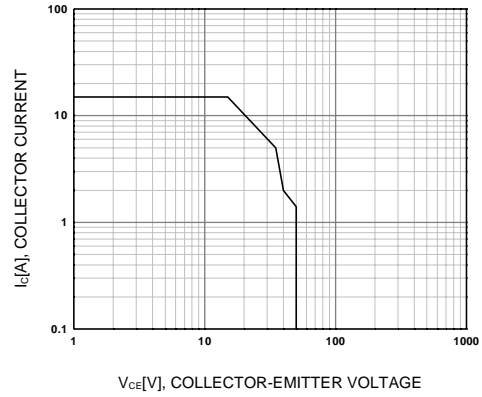


Figure 4. Safe Operating Area

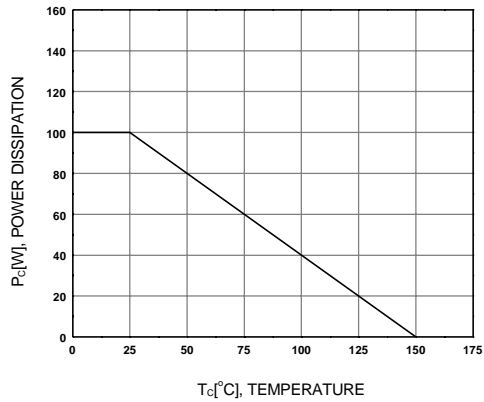
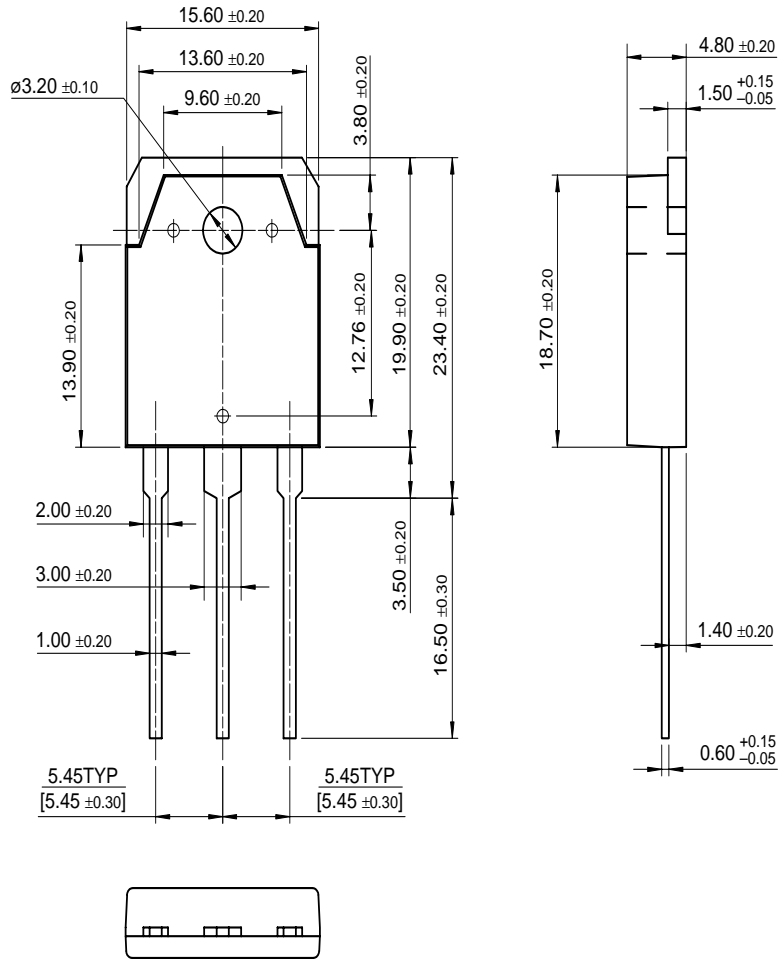


Figure 5. Power Derating

# Package Dimensions

## TO-3P



Dimensions in Millimeters

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