

# SPTECH Product Specification

## SPTECH Silicon NPN Power Transistor

**2SC6082**

### DESCRIPTION

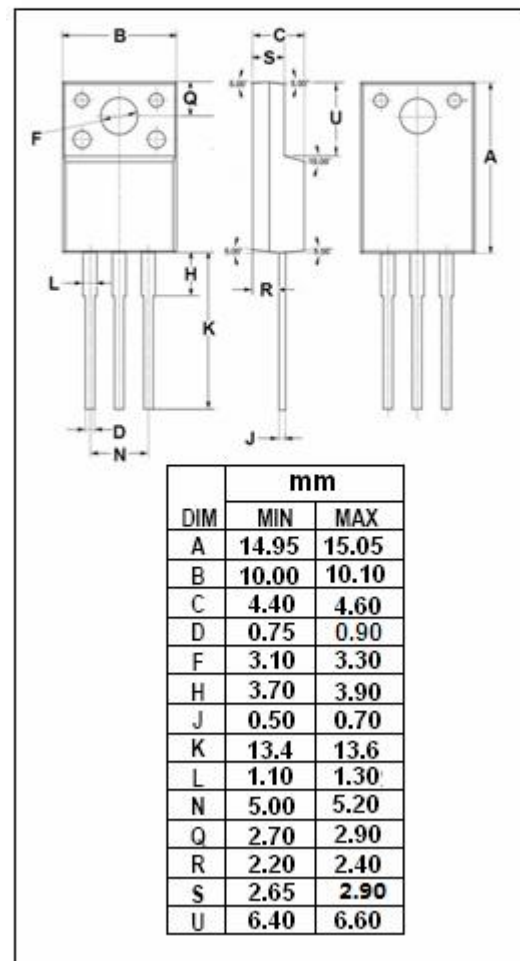
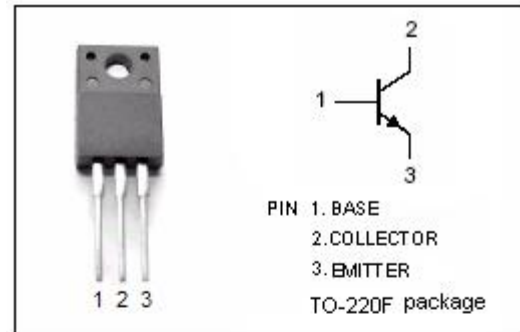
- Large current capacitance
- High speed switching
- Low saturation voltage
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

- High speed switching applications

### ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ\text{C}$ )

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CB0}$	Collector-Base Voltage	60	V
$V_{CEO}$	Collector-Emitter Voltage	50	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current- Continuous	15	A
$I_B$	Base Current- Continuous	3	A
$I_{CP}$	Collector Current-Pulse	20	A
$P_C$	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	2	W
	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	23	
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$



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### ELECTRICAL CHARACTERISTICS

$T_c=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C= 7.5\text{A}; I_B= 0.375\text{A}$			0.4	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C= 7.5\text{A}; I_B= 0.375\text{A}$			1.2	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}= 40\text{V}; I_E= 0$			10	$\mu\text{A}$
$h_{FE-1}$	DC Current Gain	$I_C= 330\text{mA}; V_{CE}= 2\text{V}$	200		560	
$h_{FE-2}$	DC Current Gain	$I_C= 10\text{A}; V_{CE}= 2\text{V}$	50			
$t_{stg}$	Storage Time	$I_C= 5\text{A}, I_{B1}= 0.25\text{A}; I_{B2}= -0.25\text{A}$		560		ns
$t_f$	Fall Time			37		ns