

isc Silicon NPN Power Transistors

2SC5417

DESCRIPTION

- NPN triple diffused planar silicon transistor
- Low Saturation Voltage
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

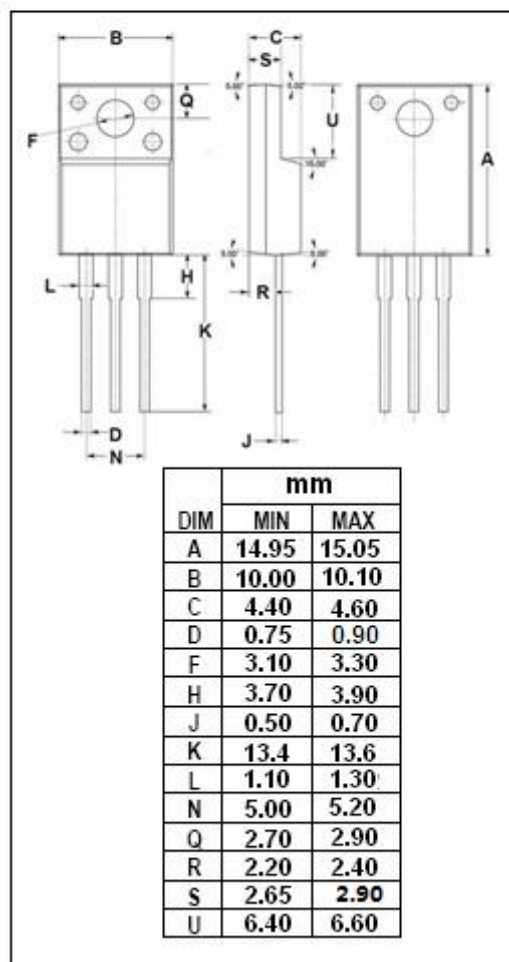
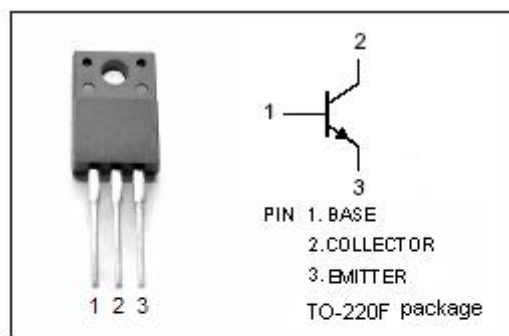
- Inverter lighting applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	1200	V
V_{CEO}	Collector-Emitter Voltage	600	V
V_{EBO}	Emitter-Base Voltage	9	V
I_C	Collector Current-Continuous	3	A
I_{CM}	Collector Current-Peak	6	A
I_B	Base Current-Continuous	1	A
P_T	Total Power Dissipation @ $T_C=25^{\circ}\text{C}$	25	W
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	5.0	$^{\circ}\text{C/W}$



isc Silicon NPN Power Transistors**2SC5417****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C = 0.1\text{A}; I_B = 0$	400			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 1.5\text{A}; I_B = 0.3\text{A}$			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = 1.5\text{A}; I_B = 0.3\text{A}$			1.5	V
I_{CEO}	Collector Cutoff Current	At rated Voltage			10	μA
I_{EBO}	Emitter Cutoff Current	At rated Voltage			1	mA
h_{FE-1}	DC Current Gain	$I_C = 0.1\text{A}; V_{CE} = 5\text{V}$	30		50	
h_{FE-2}	DC Current Gain	$I_C = 1\text{A}; V_{CE} = 5\text{V}$	10			

Switching times

t_{stg}	Storage Time	$I_C = 1.5\text{A}; I_{B1} = 0.3\text{A}; I_{B2} = -0.6\text{A}$			2.5	μs
t_f	Fall Time				0.15	μs

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