

isc Silicon NPN Power Transistors

2SCR542D

DESCRIPTION

- DC Current Gain h_{FE} :200-500@ $I_C = 0.5A$
- Collector-Emitter Breakdown Voltage
: $V_{(BR)CEO} = 30V(\text{Min})$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

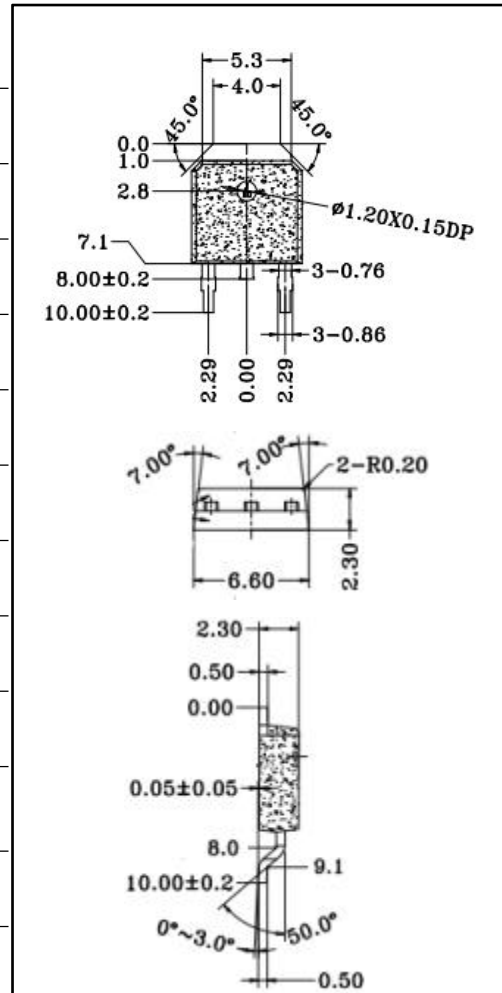
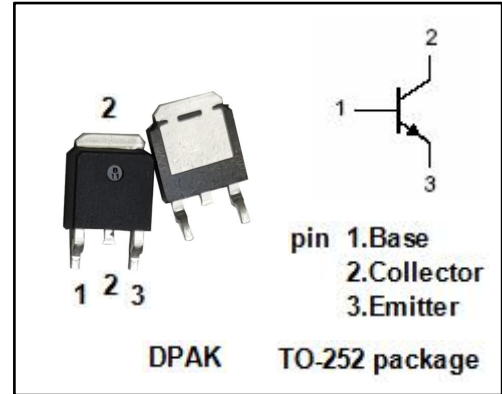
- Designed for use in general purpose amplifier and switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	6.0	V
I_C	Collector Current-Continuous	5.0	A
I_{CM}	Collector Current-Pulse	10	A
P_C	Collector Power Dissipation $T_c = 25^\circ\text{C}$	10	W
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R_{thj-c}	Thermal Resistance, Junction to Case	12.5	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 10mA; I _B = 0	30		V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 2.0A; I _B = 0.1A		0.4	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 30V; I _E = 0		1.0	μA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 4V; I _C = 0		1.0	μA
h _{FE}	DC Current Gain	I _C = 0.5A ; V _{CE} = 2.0V	200	500	

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