

isc Silicon NPN Power Transistor

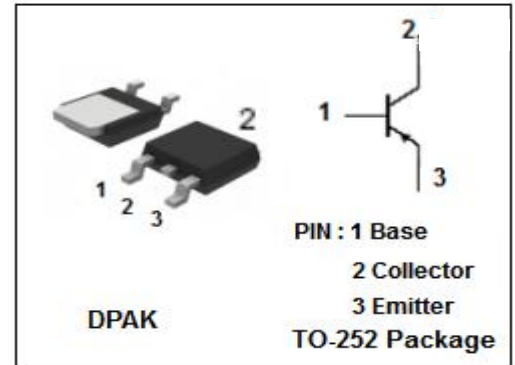
2SA1412-Z

DESCRIPTION

- With TO-252(DPAK) packaging
- Excellent linearity of h_{FE}
- Low collector-to-emitter saturation voltage
- Fast switching speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

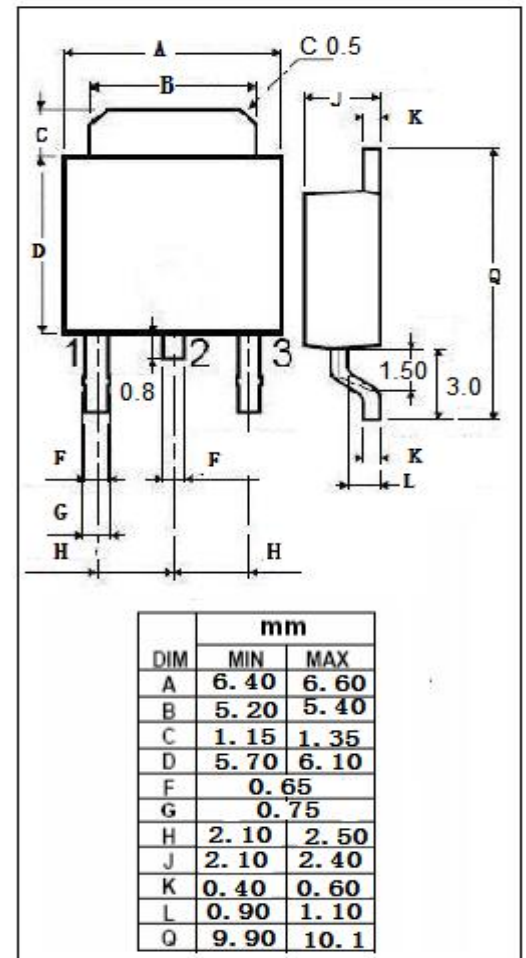
APPLICATIONS

- Relay drivers
- High-speed inverters
- Converters
- High current switching applications



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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-500	V
V_{CEO}	Collector-Emitter Voltage	-400	V
V_{EBO}	Emitter-Base Voltage	-7	V
I_C	Collector Current-Continuous	-2	A
P_C	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	2	W
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°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
BV _{CBO}	Collector-Base Breakdown Voltage	I _C =-1mA; I _B =0	-500			V
BV _{CEO}	Collector-Emitter Breakdown Voltage	I _C =-10mA; I _B =0	-400			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = -1.0A; I _B =- 0.2A			-1.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = -1.0A; I _B =- 0.2A			-1.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = -500V; I _E = 0			-10	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = -7V; I _C =0			-10	μ A
h _{FE-1}	DC Current Gain	I _C = -100mA ; V _{CE} = -5V	40		120	
h _{FE-2}	DC Current Gain	I _C = -1A ; V _{CE} = -5V	6			

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