

Silicon NPN Power Transistor

2SD1251

DESCRIPTION

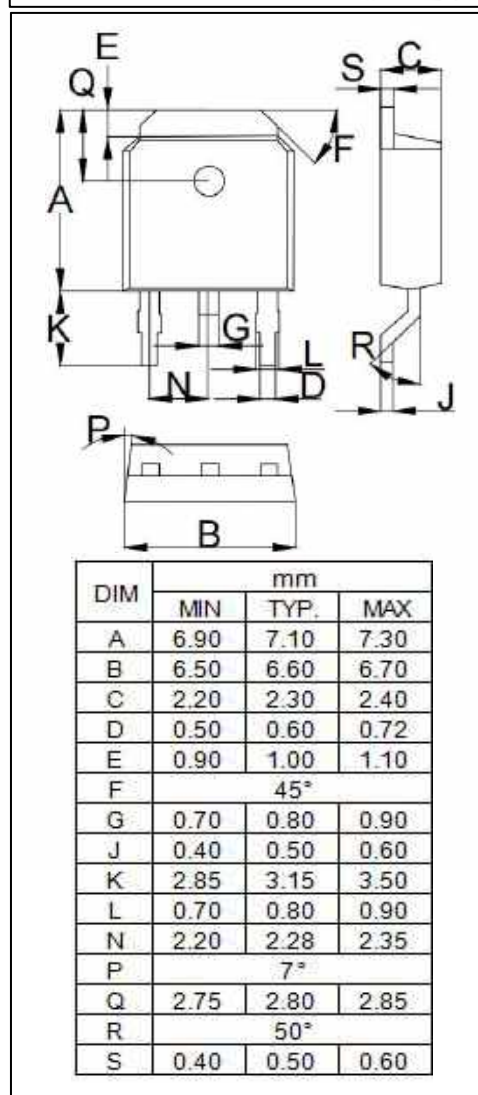
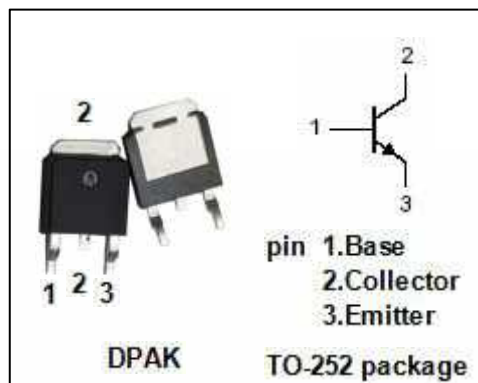
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 60V(\text{Min})$
- DC Current Gain-
: $h_{FE} = 30(\text{Min}) @ I_C = 1A$

APPLICATIONS

- DC-DC converter, relay drivers, lamp drivers, motor drivers, inverter

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	8	V
I_C	Collector Current	4	A
I_{CM}	Peak collector current	6	A
P_C	Collector Power Dissipation	1.3	W
	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	30	
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
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 2A; I _B = 0.4A	--	--	1.0	V
V _{CEO (SUS)}	Collector-Emitter Voltage	I _C = 0.2A; L=25mH	60	--	--	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 20V; I _E = 0	--	--	30	uA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 8V; I _C = 0	--	--	1	mA
h _{FE1}	DC Current Gain	I _C = 1A; V _{CE} = 3V	30	--	160	
h _{FE2}	DC Current Gain	I _C = 0.1A; V _{CE} = 3V	40	--	--	

Classification of h_{FE1}

Type	Q	P	O
Range	30-60	50-100	80-150

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