

isc Silicon NPN Power Transistor

2SD1365

DESCRIPTION

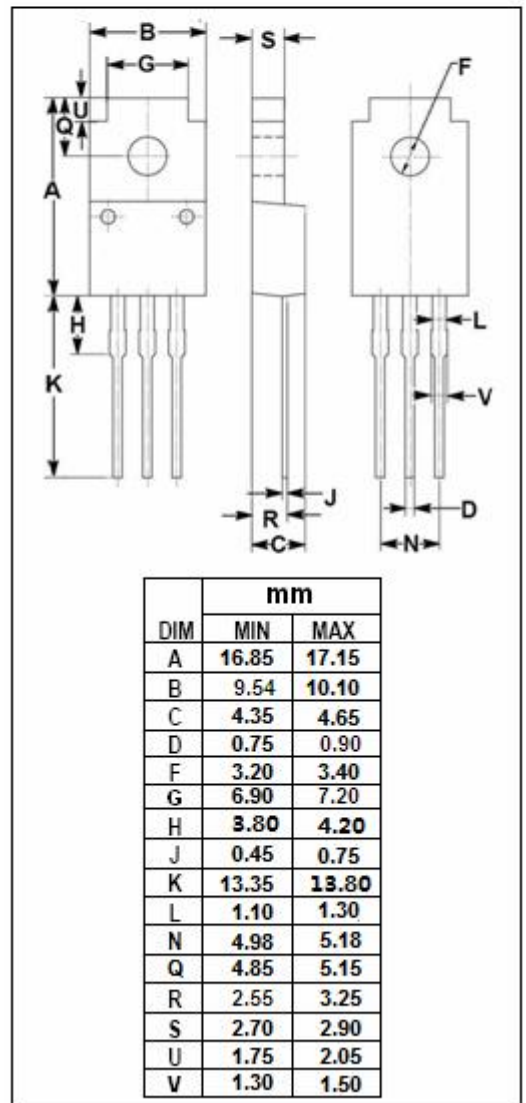
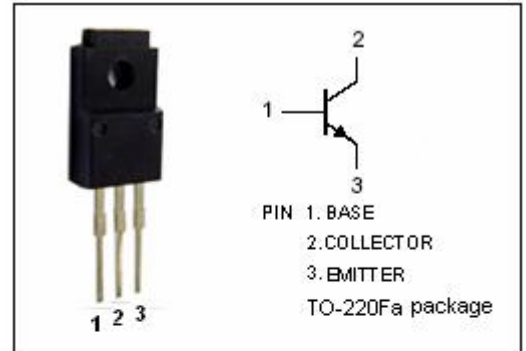
- High Collector-Base Voltage
: $V_{(BR)CBO} = 800V(\text{Min})$
- Low Collector Saturation Voltage-
: $V_{CE(sat)} = 1.5V(\text{Max}) @ I_C = 2A$
- High Speed Switching
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Switching regulators
- Motor control systems.
- Power amplifier.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	800	V
V_{CEO}	Collector-Emitter Voltage	500	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	3	A
I_{CM}	Collector Current-Peak	5	A
P_C	Collector Power Dissipation @ $T_a = 25^\circ\text{C}$	1.5	W
	Collector Power Dissipation @ $T_c = 25^\circ\text{C}$	40	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~150	$^\circ\text{C}$



isc Silicon NPN Power Transistor**2SD1365****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 10mA; I _B = 0	500			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 2.0A; I _B = 0.4A			1.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 2.0A; I _B = 0.4A			2.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 800V ; I _E = 0			10	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			10	μ A
h _{FE-1}	DC Current Gain	I _C = 5mA; V _{CE} = 5V	10			
h _{FE-2}	DC Current Gain	I _C = 0.5A; V _{CE} = 5V	20		40	
f _T	Current-Gain—Bandwidth Product	I _C = 0.5A; V _{CE} = 10V		7		MHz

Switching Times

t _{on}	Turn-on Time	I _C = 2.0A; I _{B1} = -I _{B2} = 0.4A; V _{CC} = 250V			1.0	μ s
t _s	Storage Time				4.0	μ s
t _f	Fall Time				1.0	μ s

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