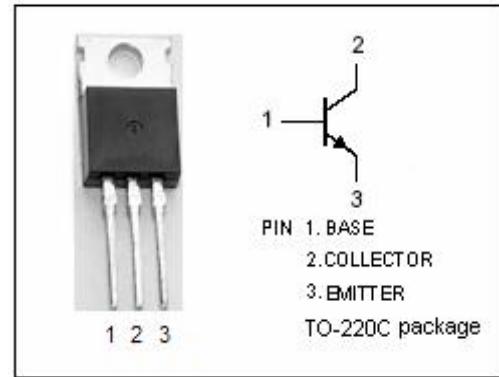


DESCRIPTION

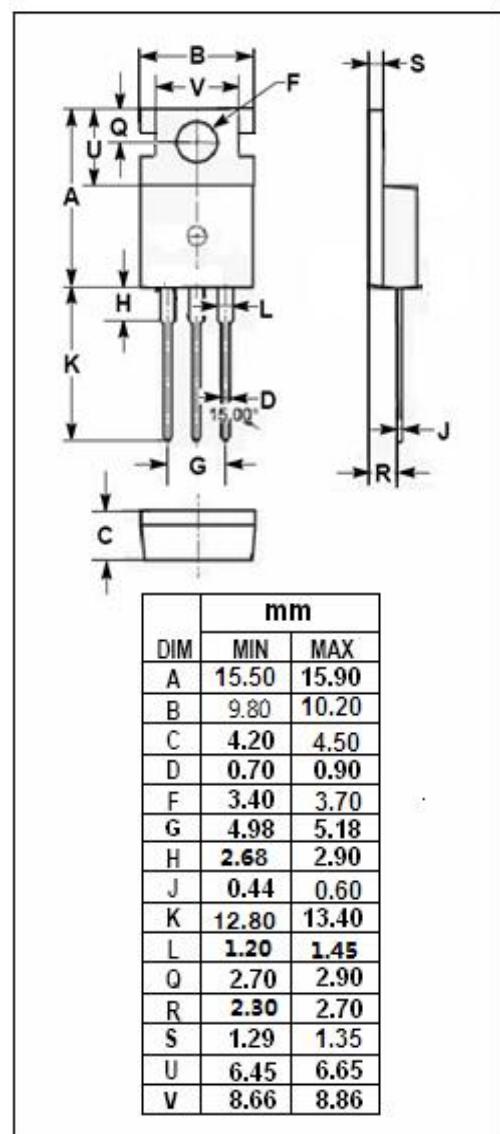
- Low Collector Saturation Voltage : $V_{CE(sat)} = 0.4V$ (Max)@ $I_C = 3A$
- Large Current Capacity
- Complement to Type 2SB919
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Large current switching of relay drivers, high-speed inverters, converters.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	8	A
I_{CP}	Collector Current-Pulse	15	A
P_c	Collector Power Dissipation @ $T_a=25^\circ C$	1.75	W
	Collector Power Dissipation @ $T_c=25^\circ C$	30	
T_J	Junction Temperature	150	°C
T_{stg}	Storage Temperature Range	-55~150	°C



isc Silicon NPN Power Transistors

2SD1235

ELECTRICAL CHARACTERISTICS

 $T_c=25^\circ C$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C= 1mA; R_{BE}= \infty$	30			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C= 1mA; I_E= 0$	60			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E= 1mA; I_C= 0$	6			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C= 3A; I_B= 0.15A$			0.4	V
I_{CBO}	Collector Cutoff Current	$V_{CB}= 40V; I_E= 0$			100	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}= 4V; I_C= 0$			100	μA
h_{FE-1}	DC Current Gain	$I_C= 1A; V_{CE}= 2V$	70		280	
h_{FE-2}	DC Current Gain	$I_C= 4A; V_{CE}= 2V$	30			
f_T	Current-Gain—Bandwidth Product	$I_C= 1A; V_{CE}= 5V$		120		MHz

Switching times

t_{on}	Turn-on Time	$I_C= 4A; I_{B1}= I_{B2}= 0.2A$ $R_L= 2.5 \Omega; P_W= 20 \mu s; V_{CC}= 10V$		0.1		μs
t_{stg}	Storage Time			0.5		μs
t_f	Fall Time			0.03		μs

◆ **h_{FE-1} Classifications**

Q	R	S
70-140	100-200	140-280

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