

isc Silicon NPN Power Transistor

KT815A

DESCRIPTION

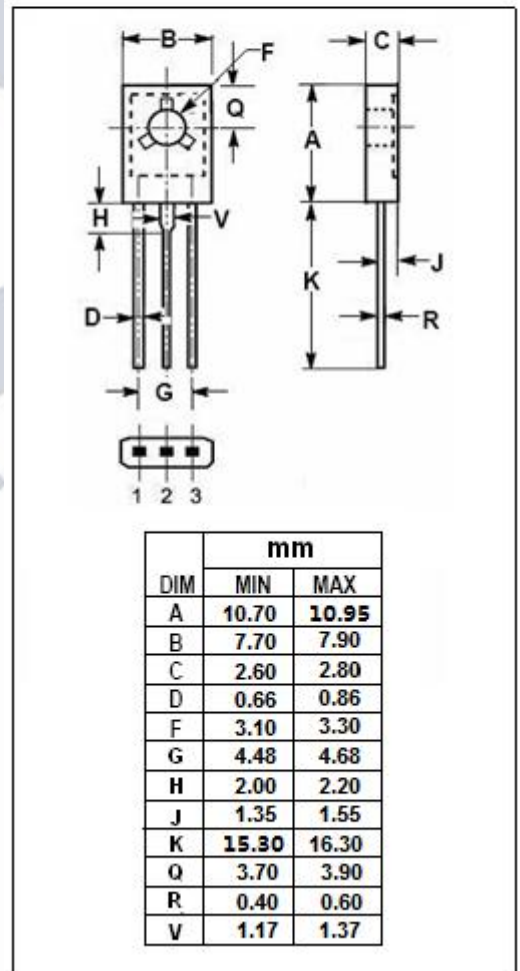
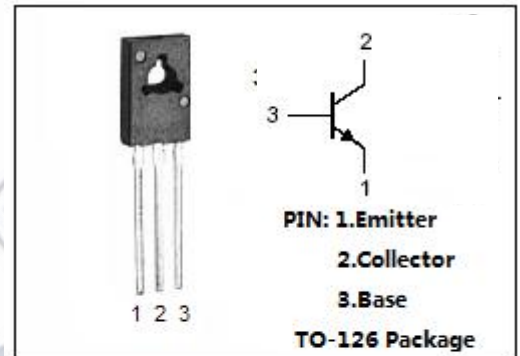
- High Collector Current- $I_C = 1.5A$
- High Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 40V(\text{Min})$
- Good Linearity of h_{FE}
- Low Saturation Voltage

APPLICATIONS

- Designed for power amplifier applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	1.5	A
I_{CP}	Collector Current-Pulse	2	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ C$	10	W
	Collector Power Dissipation @ $T_a = 25^\circ C$	1	
T_J	Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature Range	-55~150	$^\circ C$



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ELECTRICAL CHARACTERISTICS

 $T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=100\ \mu\text{A}; I_E=0$	60			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=1\text{mA}; R_{BE}=\infty$	40			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=100\ \mu\text{A}; I_C=0$	5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=500\text{mA}; I_B=50\text{mA}$			0.6	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=500\text{mA}; I_B=50\text{mA}$			1.2	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=60\text{V}; I_E=0$			10	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			10	μA
h_{FE-1}	DC Current Gain	$I_C=50\text{mA}; V_{CE}=5\text{V}$	40		275	
h_{FE-2}	DC Current Gain	$I_C=500\text{mA}; V_{CE}=5\text{V}$	20			
f_T	Current-Gain—Bandwidth Product	$I_C=0.1\text{A}; V_{CE}=5\text{V}$		60		MHz

Switching times

t_f	Fall Time	$I_C=500\text{mA}, R_L=24\ \Omega,$ $I_{B1}=I_{B2}=50\text{mA}, V_{CE}=12\text{V}$		0.1		μs
t_{off}	Turn-Off Time			0.5		μs
t_{stg}	Storage Time			0.7		μs