

**isc Silicon NPN Power Transistor**

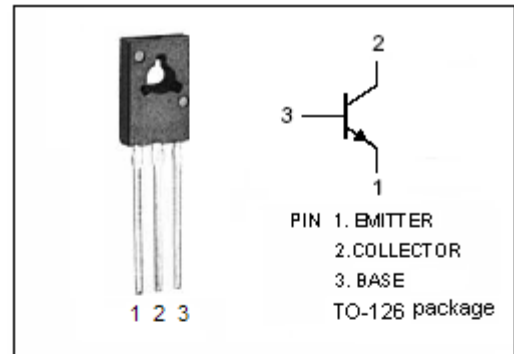
**2SD2033**

**DESCRIPTION**

- Good Linearity of  $h_{FE}$
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = 120V(\text{Min})$
- Complement to Type 2SB1353

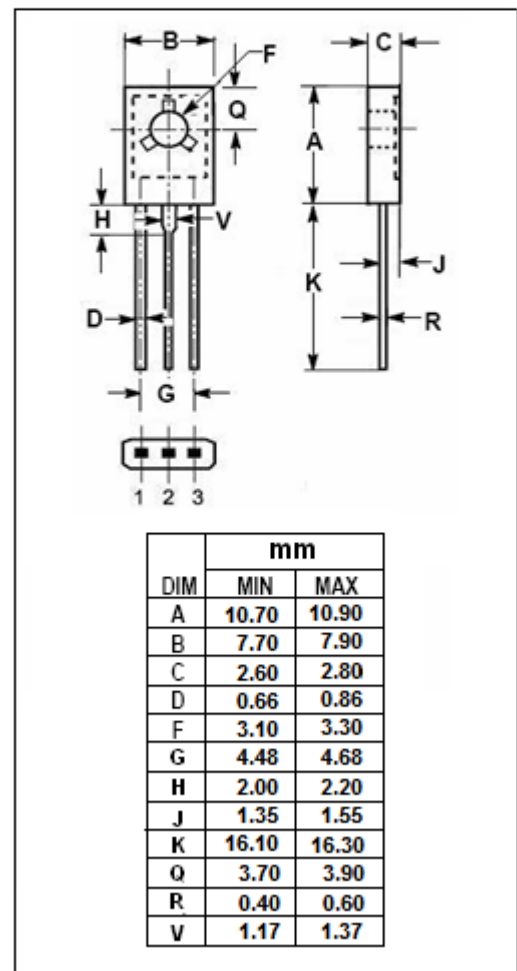
**APPLICATIONS**

- Designed for use in high voltage driver applications.



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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	120	V
$V_{CEO}$	Collector-Emitter Voltage	120	V
$V_{EBO}$	Emitter-Base Voltage	5.0	V
$I_C$	Collector Current-Continuous	1.5	A
$P_C$	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	1.8	W
	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	20	
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$



**isc Silicon NPN Power Transistor****2SD2033****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	$I_C=0.1\text{mA}; I_E=0$	120			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=10\text{mA}; I_B=0$	120			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=0.1\text{mA}; I_C=0$	5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=1\text{A}; I_B=0.1\text{A}$			2.0	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=120\text{V}; I_E=0$			10	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			10	$\mu\text{A}$
$h_{FE}$	DC Current Gain	$I_C=0.1\text{A}; V_{CE}=5\text{V}$	60		320	
$f_T$	Current-Gain—Bandwidth Product	$I_C=0.1\text{A}; V_{CE}=5\text{V}$		50		MHz

◆  **$h_{FE}$  Classifications**

D	E	F
60-120	100-200	160-320