

# isc Silicon NPN Power Transistor

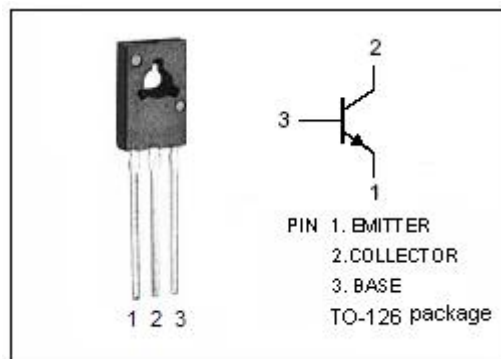
## 2SC3416

### DESCRIPTION

- High Collector-Emitter Breakdown Voltage-  
 $V_{(BR)CEO} = 200V$  (Min)
- Complement to Type 2SA1352
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

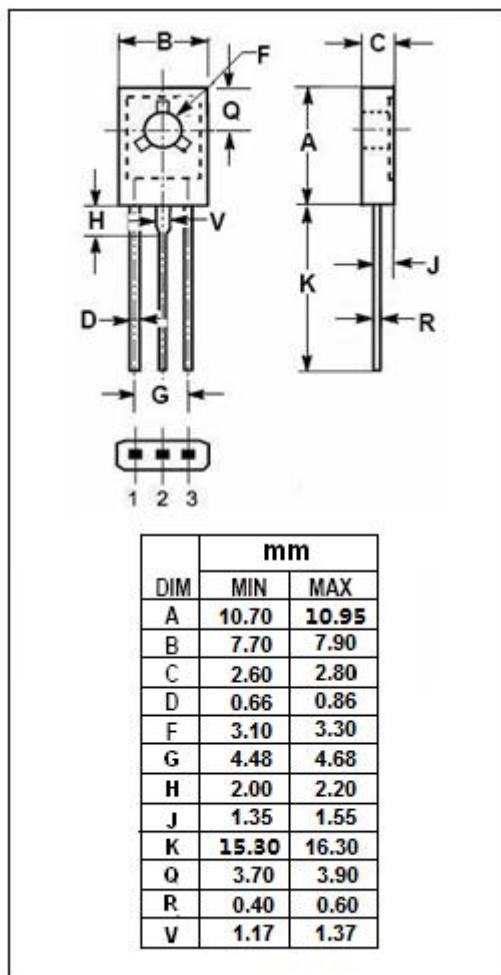
### APPLICATIONS

- Designed for color TV chroma output, high-voltage driver applications.



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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	200	V
$V_{CEO}$	Collector-Emitter Voltage	200	V
$V_{EBO}$	Emitter-Base Voltage	5.0	V
$I_C$	Collector Current-Continuous	0.1	A
$I_{CM}$	Collector Current-Peak	0.2	A
$P_C$	Collector Power Dissipation @ $T_a=25^{\circ}C$	1.2	W
	Total Power Dissipation @ $T_C=25^{\circ}C$	5	
$T_J$	Junction Temperature	150	$^{\circ}C$
$T_{stg}$	Storage Temperature Range	-55~150	$^{\circ}C$



**isc Silicon NPN Power Transistor****2SC3416****ELECTRICAL CHARACTERISTICS****T<sub>c</sub>=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CBO</sub>	Collector-Base Breakdown Voltage	I <sub>C</sub> = 10 μA; I <sub>E</sub> = 0	200			V
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 1mA; R <sub>BE</sub> = ∞	200			V
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> = 10 μA; I <sub>C</sub> = 0	5			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 20mA; I <sub>B</sub> = 2mA			0.6	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 20mA; I <sub>B</sub> = 2mA			1.0	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 150V; I <sub>E</sub> = 0			0.1	μA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 4V; I <sub>C</sub> = 0			0.1	μA
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 10mA; V <sub>CE</sub> = 40V	40		320	
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = 10mA; V <sub>CE</sub> = 30V		70		MHz
C <sub>OB</sub>	Output Capacitance	I <sub>E</sub> = 0; V <sub>CB</sub> = 30V; f= 1.0MHz		1.7		pF

**◆ h<sub>FE</sub> Classifications**

C	D	E	F
40-80	60-120	100-200	160-320

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