

isc Silicon NPN Power Transistor

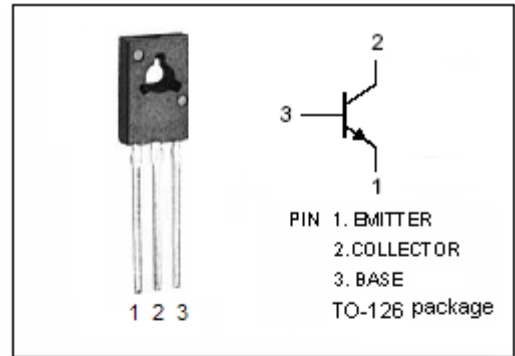
2SC3416

DESCRIPTION

- High Collector-Emitter Breakdown Voltage-  
 $V_{(BR)CEO} = 200V$  (Min)
- Complement to Type 2SA1352

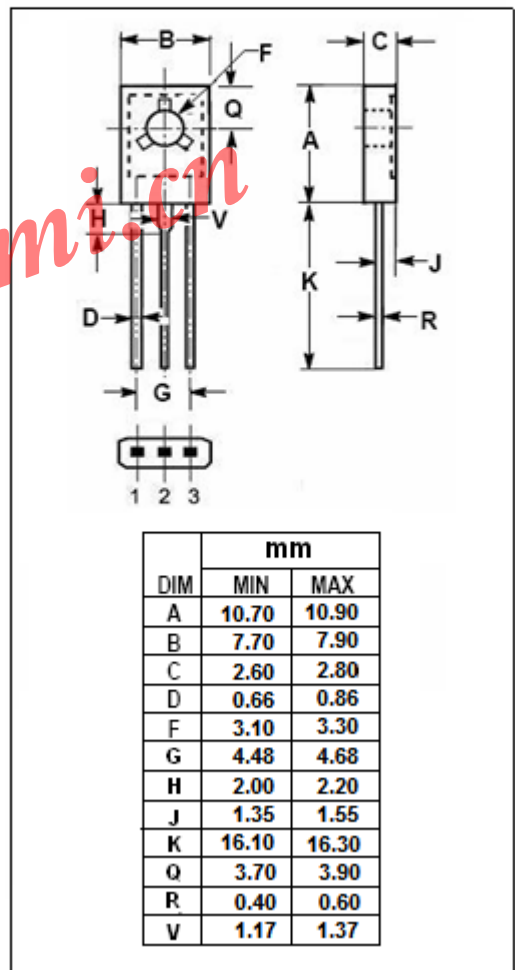
APPLICATIONS

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



ABSOLUTE MAXIMUM RATINGS(Ta=25°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	°C
$T_{stg}$	Storage Temperature Range	-55~150	°C



## isc Silicon NPN Power Transistor

## 2SC3416

## 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	$I_C=10\mu\text{A}; I_E=0$	200			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=1\text{mA}; R_{BE}=\infty$	200			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=10\mu\text{A}; I_C=0$	5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=20\text{mA}; I_B=2\text{mA}$			0.6	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=20\text{mA}; I_B=2\text{mA}$			1.0	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=150\text{V}; I_E=0$			0.1	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=4\text{V}; I_C=0$			0.1	$\mu\text{A}$
$h_{FE}$	DC Current Gain	$I_C=10\text{mA}; V_{CE}=40\text{V}$	40		320	
$f_T$	Current-Gain—Bandwidth Product	$I_C=10\text{mA}; V_{CE}=30\text{V}$		70		MHz
$C_{OB}$	Output Capacitance	$I_E=0; V_{CB}=30\text{V}; f=1.0\text{MHz}$		1.7		pF

◆  $h_{FE}$  Classifications

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