

# For Audio Amplifier output - TV Velocity Modulation (160V, 1.5A)

## 2SC5511

### ●Structure

NPN Silicon Epitaxial Planar Transistor

### ●Features

- 1) Electrical characteristics of DC current gain  $h_{FE}$  is flat.
- 2) High breakdown voltage. ( $BV_{CEO}=160V(\text{Min.})$ , at  $I_C=1mA$ )
- 3) High  $f_t$ . (Typ. 150MHz, at  $V_{CE}=10V$ ,  $I_E=-0.2A$ ,  $f=100MHz$ )
- 4) Wide SOA.

### ●Applications

Power amplifier  
Velocity modulation

### ●Absolute maximum ratings ( $T_a=25^\circ C$ )

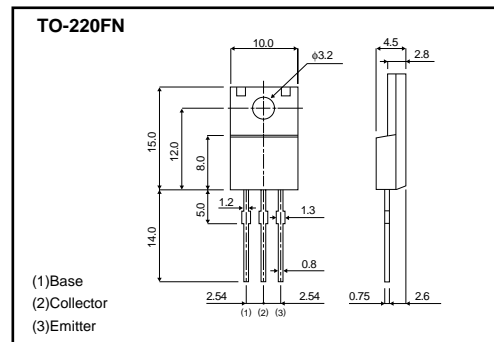
Parameter	Symbol	Limits	Unit
Collector-base voltage	$V_{CBO}$	160	V
Collector-emitter voltage	$V_{CEO}$	160	V
Emitter-base voltage	$V_{EBO}$	5	V
Collector current	DC	$I_C$	1.5 A
	Pulse	$I_{CP}$	3 A *1
Collector power dissipation	$P_C$	2	W( $T_a=25^\circ C$ )
		20	W( $T_c=25^\circ C$ )
Junction temperature	$T_j$	150	$^\circ C$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ C$

\*1  $t=100ms$

### ●Electrical characteristics ( $T_a=25^\circ C$ )

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-emitter breakdown voltage	$BV_{CEO}$	160	-	-	V	$I_C=1mA$
Collector-base breakdown voltage	$BV_{CBO}$	160	-	-	V	$I_C=50\mu A$
Emitter-base breakdown voltage	$BV_{EBO}$	5	-	-	V	$I_E=50\mu A$
Collector cutoff current	$I_{CBO}$	-	-	1.0	$\mu A$	$V_{CB}=160V$
Emitter cutoff current	$I_{EBO}$	-	-	1.0	$\mu A$	$V_{EB}=4V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	1.0	V	$I_C/I_B=1A/0.1A$
Base-emitter saturation voltage	$V_{BE(sat)}$	-	-	1.5	V	$I_C/I_B=1A/0.1A$
DC current gain	$h_{FE}$	100	-	200	-	$V_{CE}=5V$ , $I_C=0.1A$
Transition frequency	$f_t$	-	150	-	MHz	$V_{CE}=10V$ , $I_E=-0.2A$ , $f=100MHz$
Collector output capacitance	$C_{ob}$	-	20	-	pF	$V_{CB}=10V$ , $I_E=0A$ , $f=1MHz$

### ●External dimensions (Unit : mm)



### ●Complements

PNP	NPN
2SA2005	2SC5511

### ●Packaging specifications and $h_{FE}$

Type	$h_{FE}$	Package	Taping
		Code	-
2SC5511	E	Basic ordering unit (pieces)	500
			○

$h_{FE}$  values are classified as follows:

Item	E
$h_{FE}$	100 to 200

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