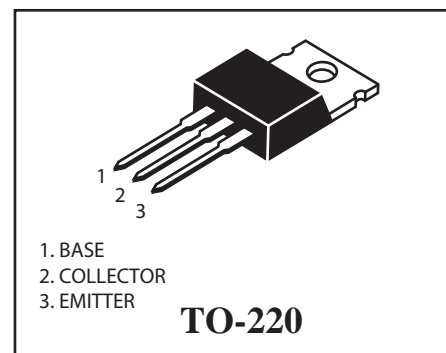
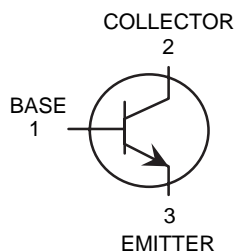


### NPN Silicon Epitaxial Power Transistor

**(Pb)** Lead(Pb)-Free

#### FEATURES:

- \* Low frequency power amplifier
- \* Complement to 2SB834



#### MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	60	V
$V_{CEO}$	Collector-Emitter Voltage	60	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current -Continuous	3	A
$P_C$	Collector Power Dissipation	1.5	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55-150	$^\circ\text{C}$

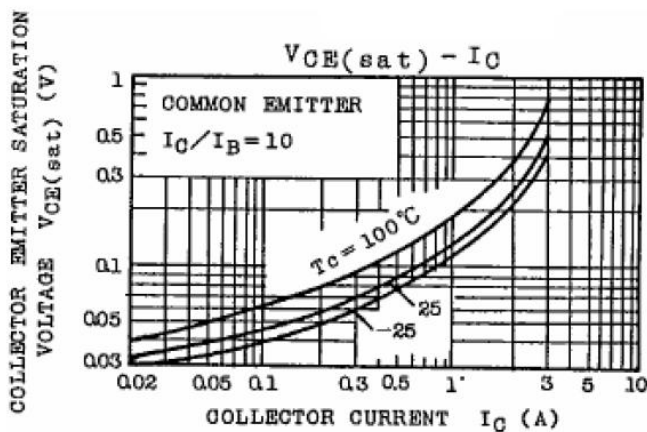
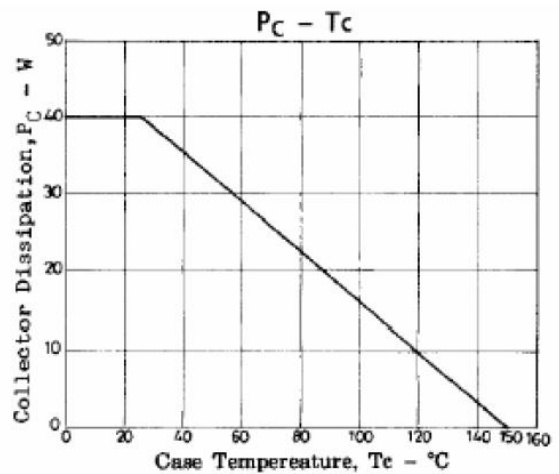
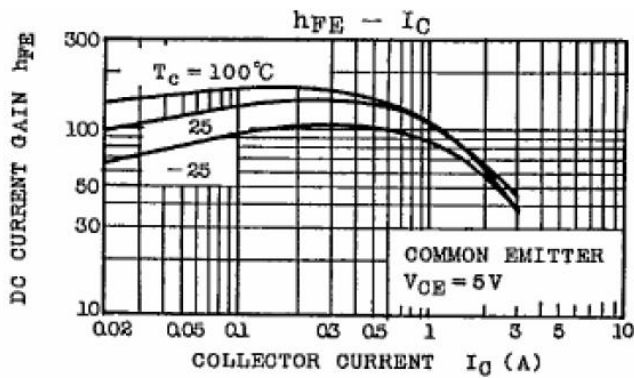
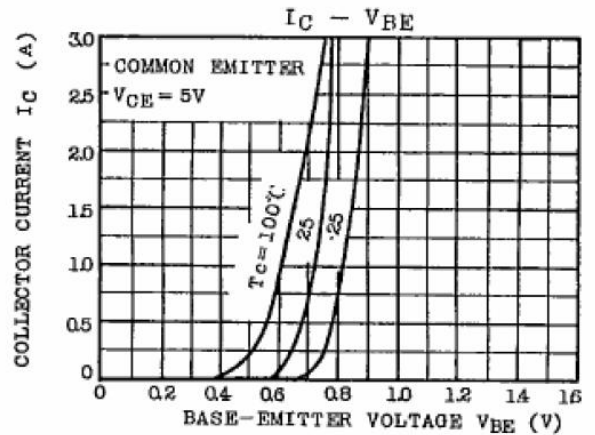
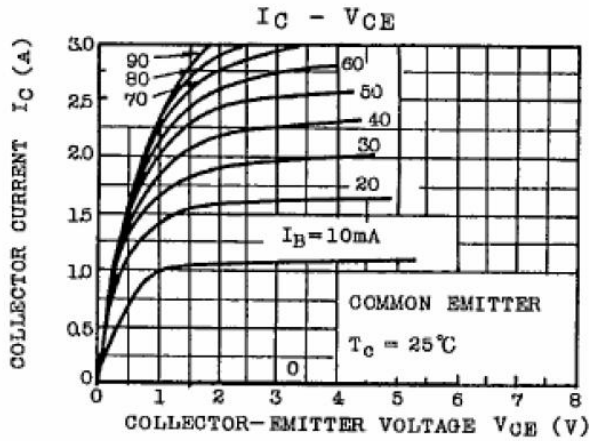
#### ELECTRICAL CHARACTERISTICS ( $T_{amb}=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}$ , $I_E=0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=50\text{mA}$ , $I_B=0$	60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}$ , $I_C=0$	7			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=60\text{V}$ , $I_E=0$			100	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=7\text{V}$ , $I_C=0$			100	$\mu\text{A}$
DC current gain	$h_{FE}$	$V_{CE}=5\text{V}$ , $I_C=500\text{mA}$	60		300	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=3\text{A}$ , $I_B=300\text{mA}$			1	V
Base-emitter voltage	$V_{BE}$	$I_C=0.5\text{A}$ , $V_{CE}=5\text{V}$			1	V
Transition Frequency	$f_T$	$V_{CE}=5\text{V}$ , $I_C=500\text{mA}$		3		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=10\text{V}$ , $I_E=0$ , $f=1\text{MHz}$		70		pF
Turn on time	$t_{on}$	$I_{B1}=-I_{B2}=0.2\text{A}$ , $I_C=2\text{A}$ $V_{CC}=30\text{V}$ , $PW=20\mu\text{s}$		0.8		$\mu\text{s}$
Storage time	$t_s$			1.5		$\mu\text{s}$
Fall time	$t_f$			0.8		$\mu\text{s}$

#### CLASSIFICATION OF $h_{FE}$

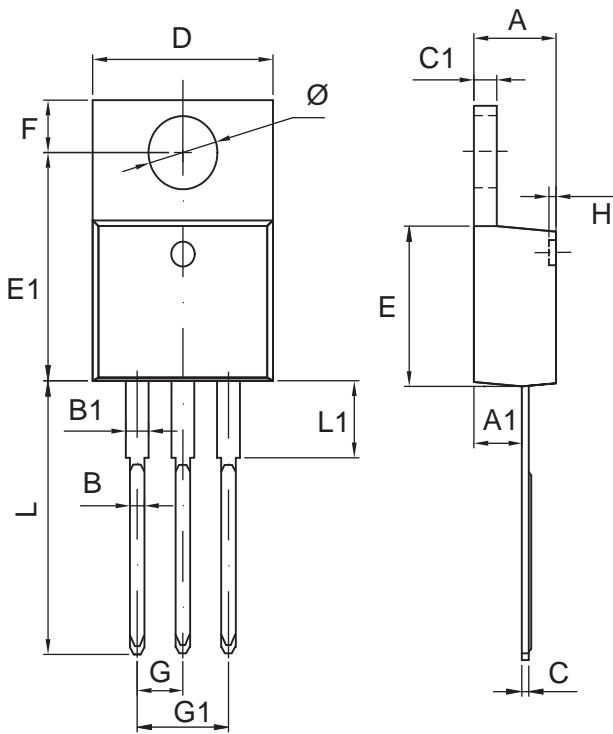
Rank	O	Y	GR
Range	60-120	100-200	150-300

## Typical Characteristics



## TO-220 Outline Dimensions

unit:mm



TO-220		
Dim	Min	Max
A	4.47	4.67
A1	2.52	2.82
B	0.71	0.91
B1	1.17	1.37
C	0.31	0.53
C1	1.17	1.37
D	10.01	10.31
E	8.50	8.90
E1	12.06	12.446
G	2.54 TYP	
G1	4.98	5.18
F	2.59	2.89
H	0.00	0.30
L	13.4	13.8
L1	3.56	3.96
Φ	3.73	3.93