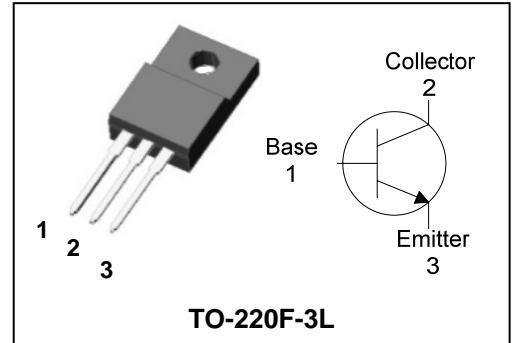


## Features

- Power Transistor General Purpose application
- Low saturation voltage :  $V_{CE(SAT)}=0.4V$  Typ.
- High Voltage :  $V_{CEO}=60V$  Min.

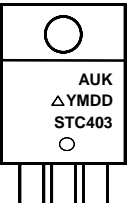
## PIN Connection



## Ordering Information

Type NO.	Marking	Package Code
STC403	STC403	TO-220F-3L

## Marking Diagram

	<p>Column 1 : Manufacturer</p> <p>Column 2 : Production Information</p> <p style="padding-left: 20px;">- <math>\Delta</math> : Factory Management Code</p> <p style="padding-left: 20px;">- YMDD : Date Code (Year, Month, Date)</p> <p>Column 3 : Device Code</p>
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## Absolute maximum ratings

Characteristic	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	80	V
Collector-emitter voltage	$V_{CEO}$	60	V
Emitter-base voltage	$V_{EBO}$	5	V
Collector current	$I_C$	3	A
Collector power dissipation ( $T_c=25^\circ C$ )	$P_C$	15	W
Junction temperature	$T_j$	150	$^\circ C$
Storage temperature	$T_{stg}$	-55 ~ 150	$^\circ C$

Characteristic		Symbol	Typ.	Max.	Unit
Thermal resistance	Junction-case	$R_{th(J-C)}$	-	8.33	$^\circ C/W$

**Electrical Characteristics**

Characteristic		Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-emitter breakdown voltage		$BV_{CEO}$	$I_C=50mA, I_B=0$	60	-	-	V
Collector cut-off current		$I_{CBO}$	$V_{CB}=60V, I_E=0$	-	-	50	$\mu A$
Emitter cut-off current		$I_{EBO}$	$V_{EB}=5V, I_C=0$	-	-	50	$\mu A$
DC current gain		$h_{FE}^*$	$V_{CE}=5V, I_C=0.5A$	200	-	400	-
Base-emitter on voltage		$V_{BE(ON)}$	$V_{CE}=5V, I_C=0.5A$	-	0.7	1	V
Collector-emitter saturation voltage		$V_{CE(sat)}$	$I_C=2A, I_B=0.2A$	-	0.4	1	V
Transition frequency		$f_T$	$V_{CB}=5V, I_C=0.5A$	-	30	-	MH
Collector output capacitance		$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$	-	20	-	pF
Switching Time	Turn-on Time	$T_{on}$		-	0.65	-	$\mu S$
	Storage Time	$T_{stg}$		-	1.3	-	
	Fall Time	$T_f$		-	0.65	-	

\*  $h_{FE}$  rank : 200~400 Only

Electrical Characteristic Curves

Fig. 1  $P_C - T_a$

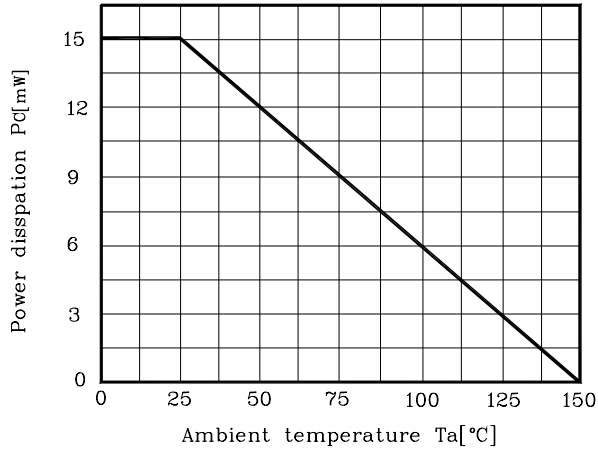


Fig. 2  $V_{CE(sat)} - I_C$

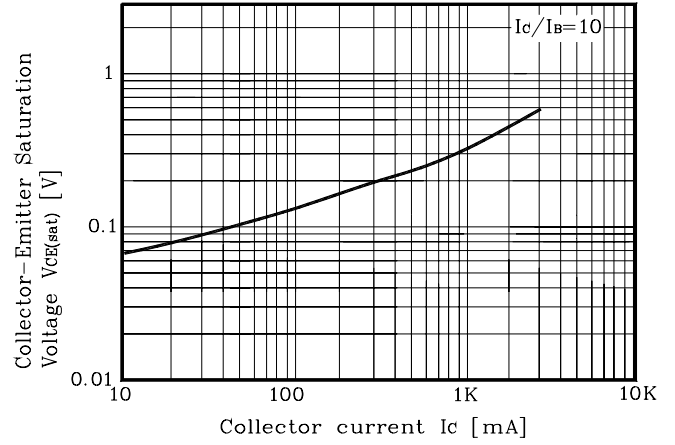


Fig. 3  $h_{FE} - I_C$

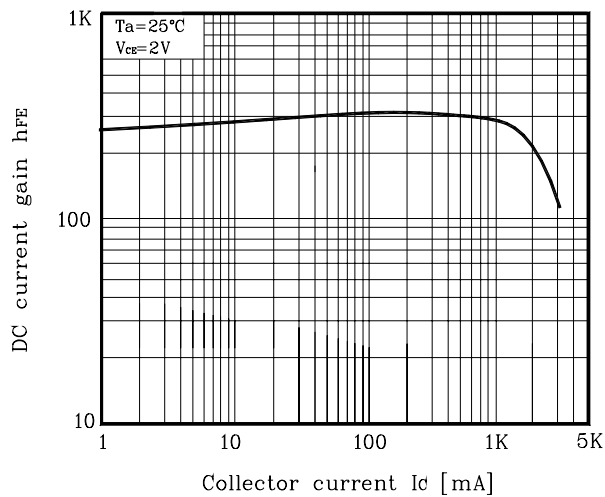


Fig. 4  $I_C - V_{CE}$

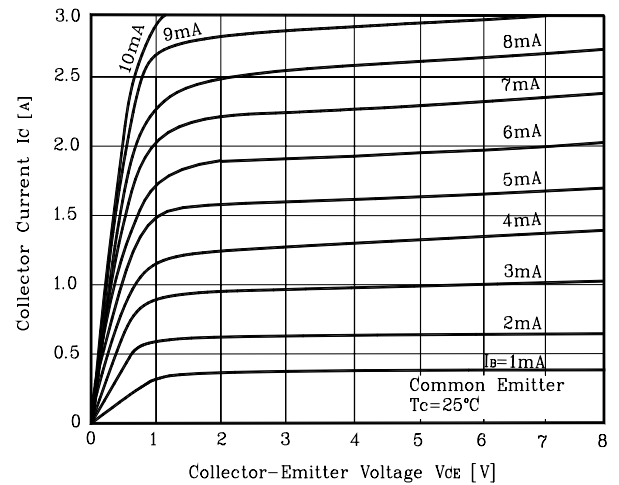
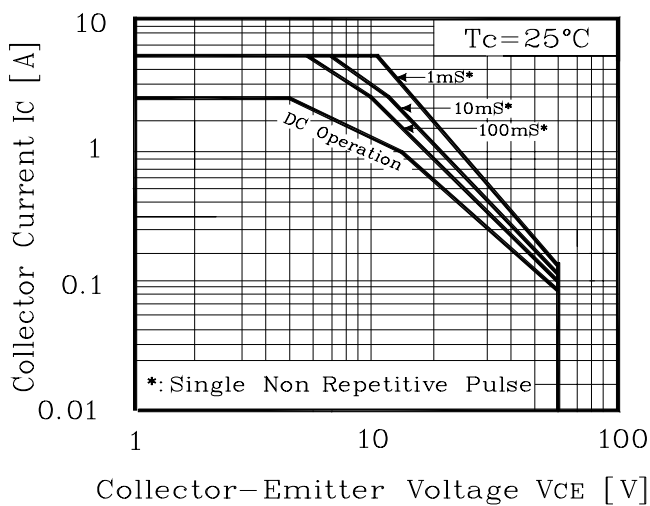
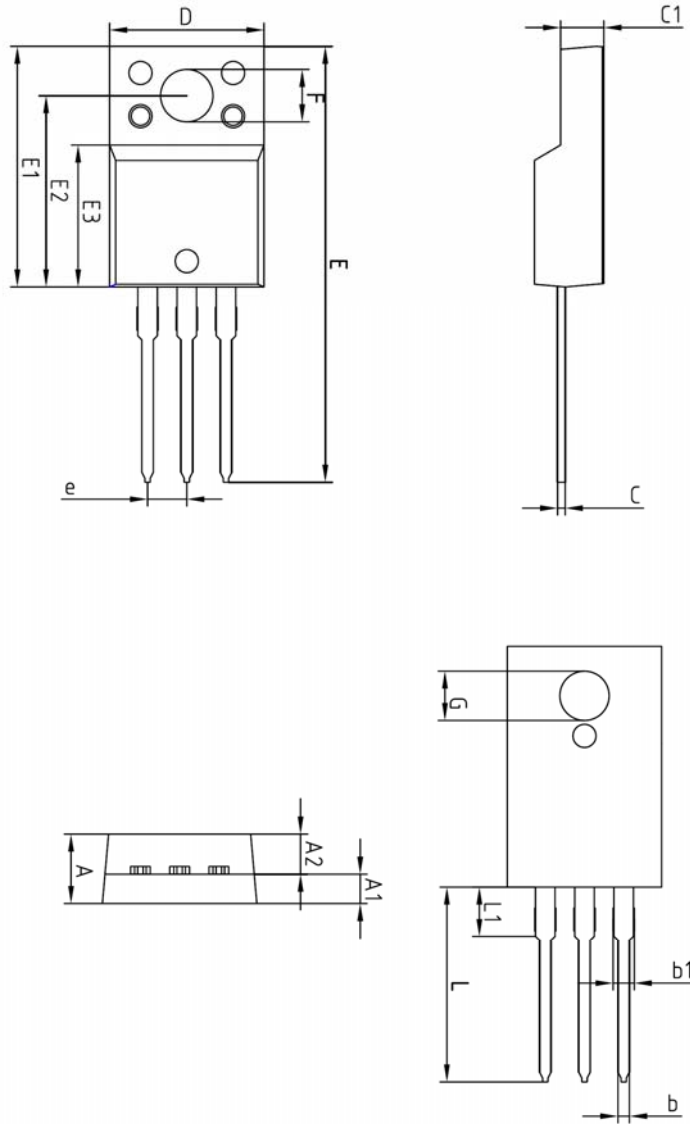


Fig. 5 Safe Operating Area



Outline Dimension



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	-	-	4.60	
A1	2.45	2.50	2.55	
A2	1.95	2.00	2.05	
b	0.65	0.75	0.85	
b1	1.07	1.27	1.47	
C	0.40	0.50	0.60	
C1	2.70	2.80	2.90	
D	9.90	10.00	10.10	
E	28.00	-	28.60	
E1	15.50	15.60	15.70	
E2	12.30	12.40	12.50	
E3	9.15	9.20	9.25	
F	3.30	3.40	3.50	
G	3.10	3.20	3.30	
e	2.54 BSC			
L	12.40	-	13.00	
L1	3.46 BSC			

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