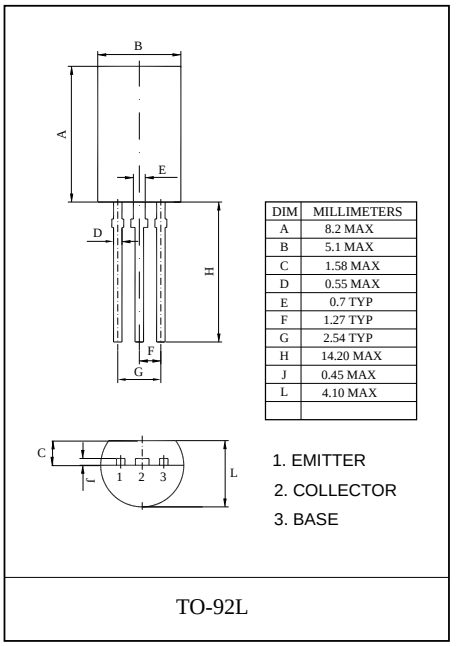
FTC1027 TRANSISTOR (NPN)



TO-92L

FEATURES

- Complementary to FTA1023
- High Voltage Applications

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	120	V
V_{CEO}	Collector-Emitter Voltage	120	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	0.8	A
P_C	Collector Power Dissipation	1	W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	125	℃/W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~+150	℃

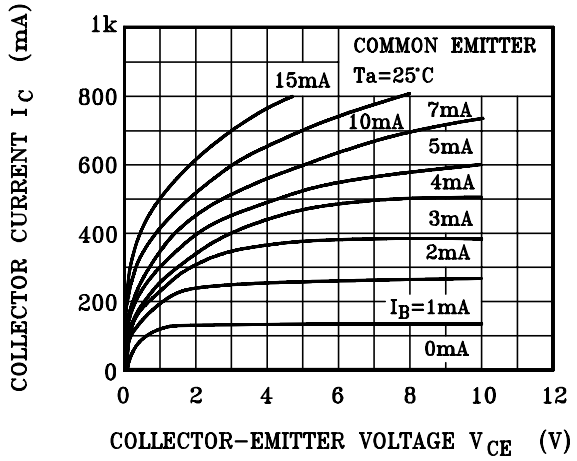
ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=1mA,I_E=0	120			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=10mA,I_B=0	120			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=1mA,I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=120V,I_E=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=5V,I_C=0			0.1	μA
DC current gain	h_{FE}	V_{CE}=5V, I_C=100mA	80		240	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=500mA,I_B=50mA			1	V
Base-emitter voltage	V_{BE}	V_{CE}=5V, I_C=500mA			1	V
Collector output capacitance	C_{ob}	V_{CB}=10V,I_E=0, f=1MHz			30	pF
Transition frequency	f_T	V_{CE}=5V,I_C=100mA		120		MHz

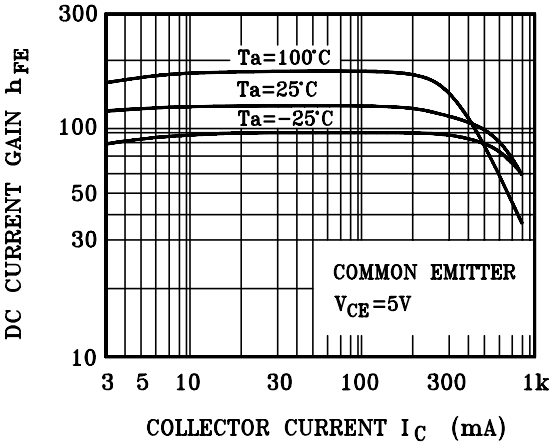
CLASSIFICATION OF h_{FE}

RANK	O	Y
RANGE	80-160	120-240

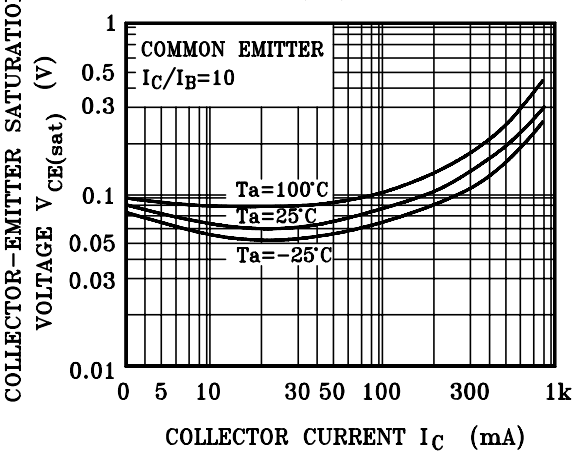
I_C – V_{CE}



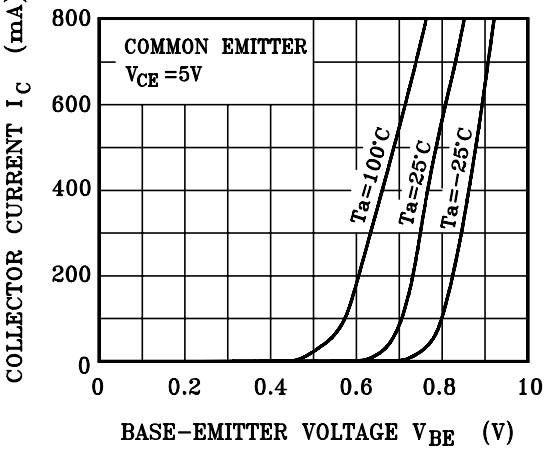
h_{FE} – I_C



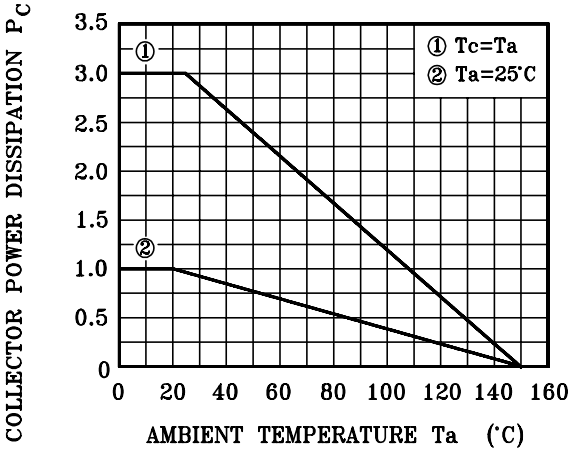
$V_{CE(sat)}$ – I_C



I_C – V_{BE}



P_C – Ta



SAFE OPERATING AREA