

Features

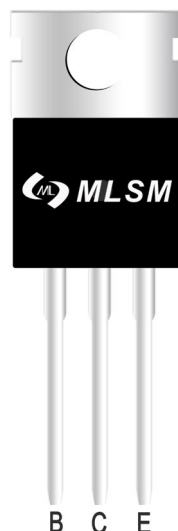
- Large current capacitance
- Complementary NPN Types:TIP41CF

Applications

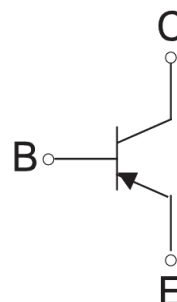
- Medium power linear switching applications

Marking

- TIP42CF



TO-220-3L top view



Schematic diagram



Halogen-Free

MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

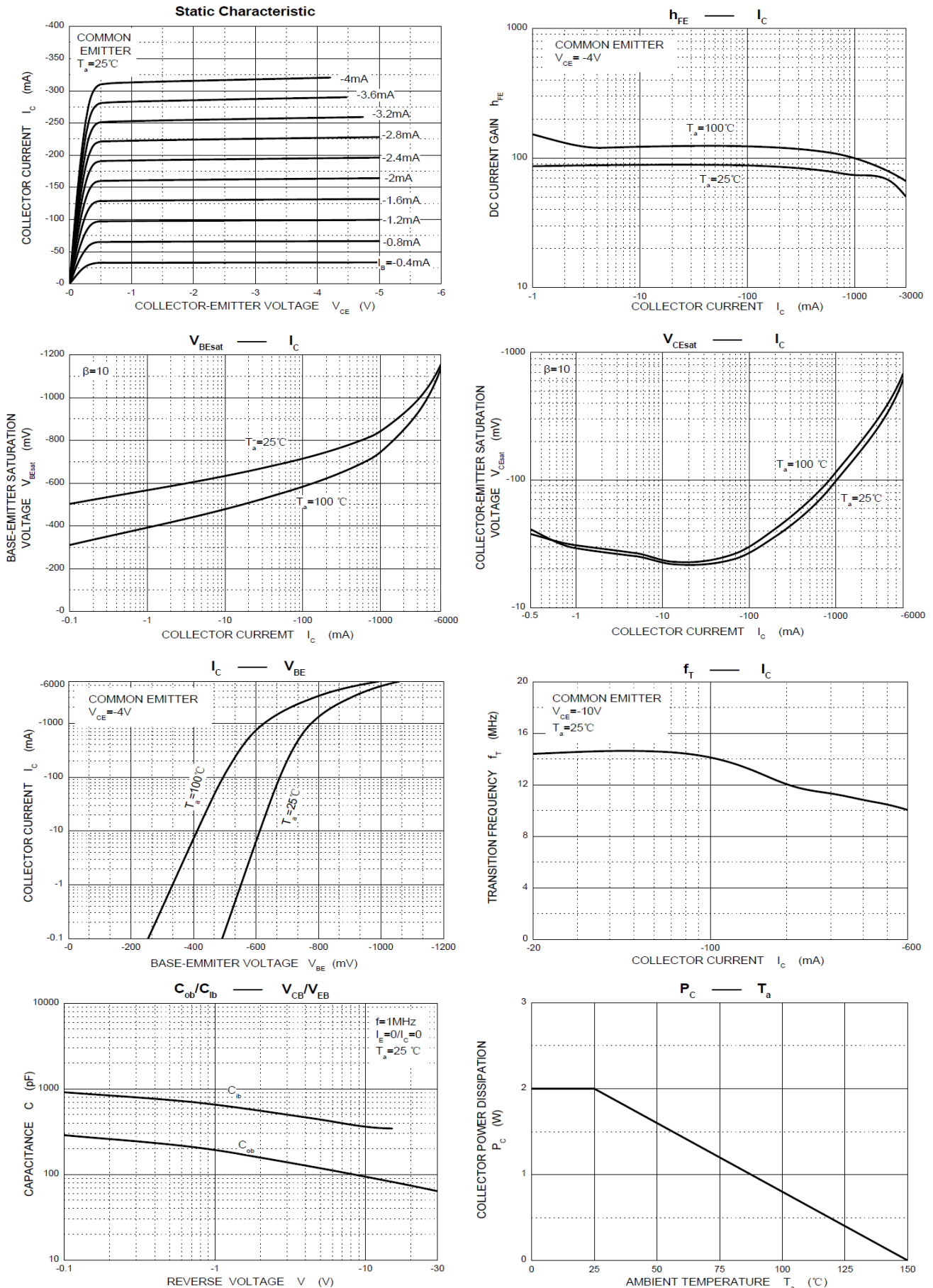
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-100	V
V_{CEO}	Collector-Emitter Voltage	-100	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-6	A
P_C	Collector Power Dissipation	2	W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	62.5	°C/W
T_j	Junction Temperature	150	°C
T_{stg}	Operation Junction and Storage Temperature Range	-55~ + 150	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

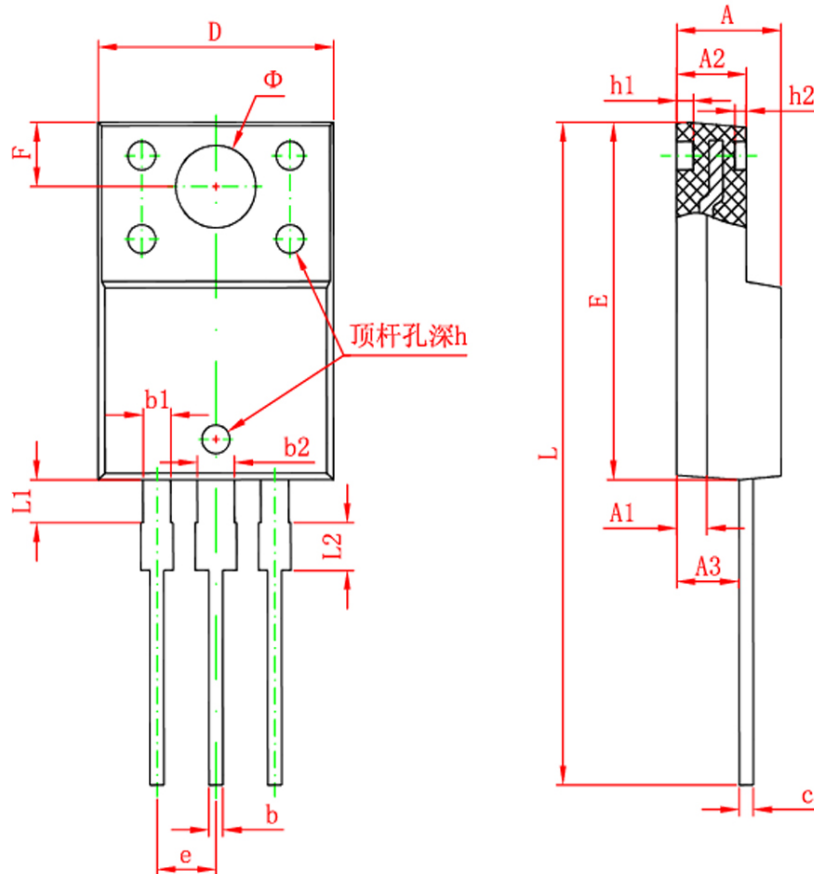
Symbol	Parameter	Condition	Min	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C = -1mA, I_E = 0$	-100	--	V
$V_{CEO(SUS)}^*$	Collector-emitter breakdown voltage	$I_C = -30mA, I_B = 0$	-100	--	V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_C = -1mA, I_C = 0$	-5	--	V
I_{CBO}	Collector cut-off current	$V_{CB} = -100V, I_E = 0$	--	-400	μA
I_{CEO}	Collector cut-off current	$V_{CE} = -60V, I_B = 0$	--	-700	μA
I_{EBO}	Emitter cut-off current	$V_{EB} = -5V, I_C = 0$	--	-4	mA
$h_{FE(1)}$	DC current gain	$V_{CE} = -4V, I_C = -0.3A$	30	--	
$h_{FE(2)}$		$V_{CE} = -4V, I_C = -3A$	15	75	
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C = -6A, I_B = -0.6A$	--	-1.5	V
V_{BE}	Base-emitter voltage	$V_{CE} = -4V, I_C = -6A$	--	-2	V
f_T	Transition frequency	$V_{CE} = -10V, I_C = -0.5$	3	--	MHZ

*Notes: Pulse Test : Pulse Width≤300μs, duty cycle ≤2%.

Typical Operating Characteristics



TO-220F Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	4.300	4.700	0.169	0.185
A1	1.300 REF.		0.051 REF.	
A2	2.800	3.200	0.110	0.126
A3	2.500	2.900	0.098	0.114
b	0.500	0.750	0.020	0.030
b1	1.100	1.350	0.043	0.053
b2	1.500	1.750	0.059	0.069
c	0.500	0.750	0.020	0.030
D	9.960	10.360	0.392	0.408
E	14.800	15.200	0.583	0.598
e	2.540 TYP.		0.100 TYP.	
F	2.700 REF.		0.106 REF.	
Φ	3.500 REF.		0.138 REF.	
h	0.000	0.300	0.000	0.012
h1	0.800 REF.		0.031 REF.	
h2	0.500 REF.		0.020 REF.	
L	28.000	28.400	1.102	1.118
L1	1.700	1.900	0.067	0.075
L2	1.900	2.100	0.075	0.083