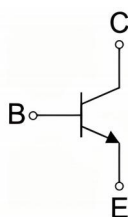


FEATURES

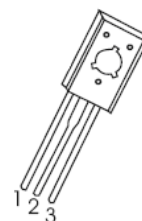
Power Dissipation

D882P



TO-18

1. EMITTER
2. COLLECTOR
3. BASE



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Absolute Maximum Ratings (@ $T_C = 25^\circ\text{C}$ unless otherwise specified)

Symbol	Parameter	Rating	Units
V_{DS}	Drain-Source Voltage	-60	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current – Continuous ($T_A=25^\circ\text{C}$)	-2	A
	Drain Current – Continuous ($T_A=70^\circ\text{C}$)	-1.6	A
I_{DM}	Drain Current – Pulsed ¹	-8	A
P_D	Power Dissipation ($T_A=25^\circ\text{C}$)	1.56	W
	Power Dissipation – Derate above 25°C	0.012	W/ $^\circ\text{C}$
T_{STG}	Storage Temperature Range	-55 to 150	$^\circ\text{C}$
T_J	Operating Junction Temperature Range	-55 to 150	$^\circ\text{C}$

Thermal Characteristics

Symbol	Parameter	Typ.	Max.	Unit
$R_{\theta JA}$	Thermal Resistance Junction to ambient	---	80	$^\circ\text{C/W}$

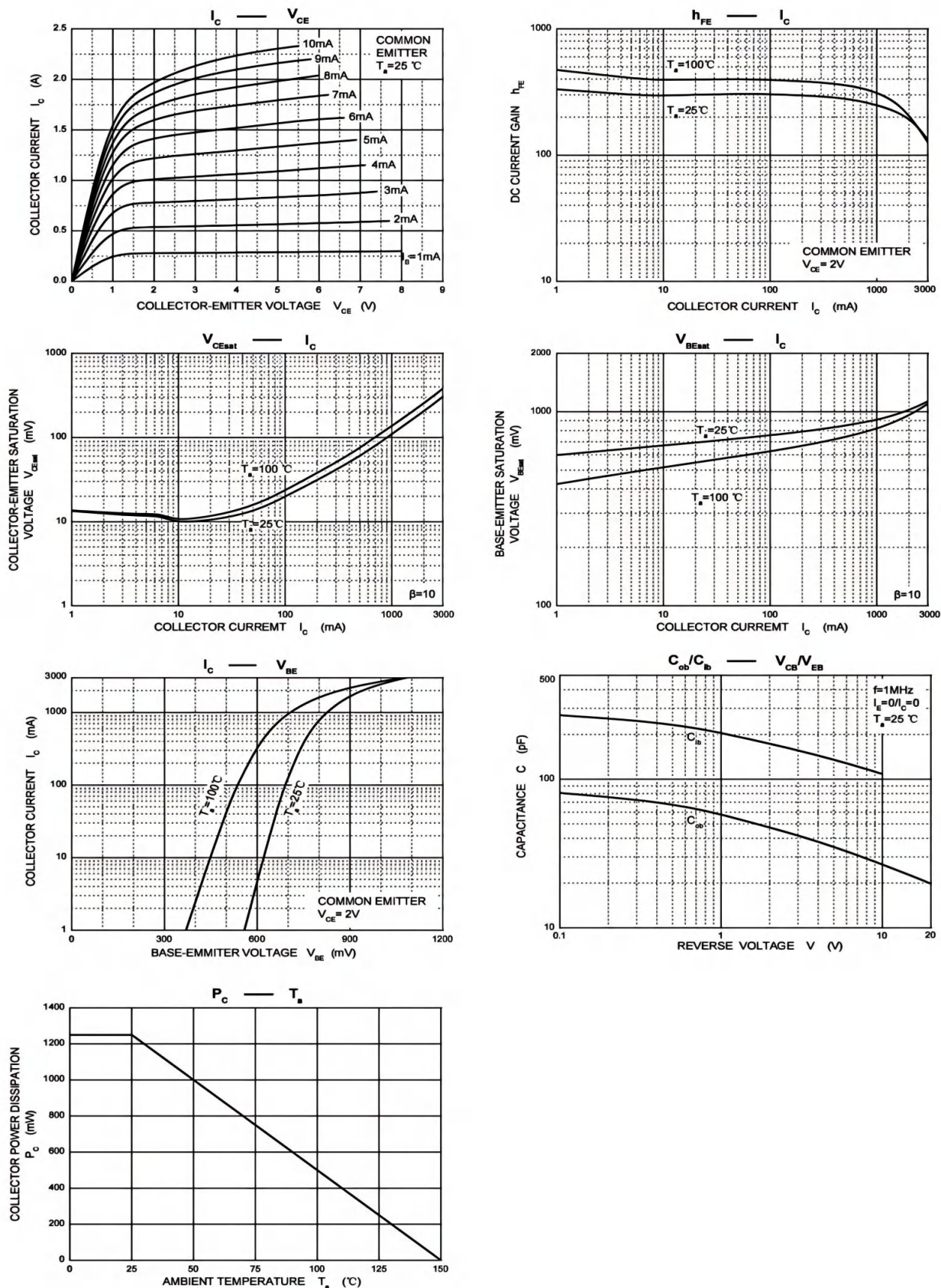
ELECTRICAL CHARACTERISTICS(Tc=25°C unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYPE	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100\mu A, I_E = 0$	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 10mA, I_B = 0$	30			
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 100\mu A, I_C = 0$	6			
Collector cut-off current	I_{CBO}	$V_{CB} = 40V, I_E = 0$			1	μA
Collector cut-off current	I_{CEO}	$V_{CE} = 30V, I_B = 0$			10	
Emitter cut-off current	I_{EBO}	$V_{EB} = 6V, I_C = 0$			1	
DC current gain	h_{FE}	$V_{CE} = 2V, I_C = 1A$	60		400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 2A, I_B = 0.2A$			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$				1.5	
Transition frequency	f_T	$V_{CE} = 5V, I_C = 0.1A, f = 10MHz$	50	80		MHz

CLASSIFICATION OF h_{FE}

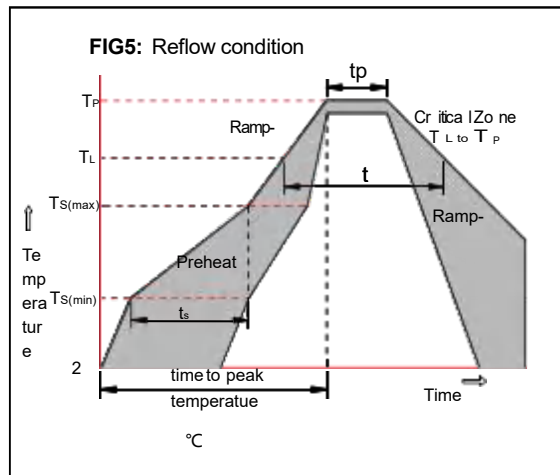
RANK	R	O	P	GR
RANGE	60-120	100-200	160-320	200-400

RATING AND CHARACTERISTIC CURVES



Soldering parameters

Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150 °C
	-Temperature Max($T_{s(max)}$)	+200 °C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3 °C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3 °C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217 °C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_P)		+260(+0/-5) °C
Time within 5 °C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6 °C/sec. Max
Time 25 °C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260 °C



Package Dimensions & Suggested Pad Layout

Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	2.40	2.80	0.094	0.110
A1	1.00	1.40	0.039	0.055
b	0.66	0.86	0.026	0.034
b1	1.17	1.37	0.046	0.054
c	0.40	0.60	0.016	0.024
D	7.30	7.70	0.287	0.303
E	10.60	11.00	0.417	0.433
e	2.25	2.33	0.089	0.092
e1	4.50	4.66	0.177	0.183
L	14.00	15.00	0.551	0.591
L1	1.90	2.50	0.075	0.098
Φ	3.10	3.30	0.122	0.130