Power Transistor(50V,3A)

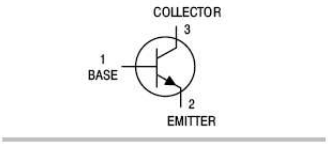
2SD1762

FEATURES

- Low $V_{CE(sat)}$

  $V_{CE(sat)}$=0.5V(Typ)（I_C/I_B=2A/0.2A）
- Complements the 2SB1185.

Lead-free



TO-220AB

MAXIMUM RATING operating temperature range applies unless otherwise specified

Symbol	Parameter		Value	Unit
V_{CBO}	Collector-Base Voltage		60	V
V_{CEO}	Collector-Emitter Voltage		50	V
V_{EBO}	Emitter-Base Voltage		5	V
I_C	Collector Current	DC Pulse	3 4.5	A
P_C	Collector Dissipation	T_a=25℃ T_C=25℃	1 25	W
T_j,T_{stg}	Junction and Storage Temperature		-55 to +150	℃

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ELECTRICAL CHARACTERISTICS Ratings at 25℃ ambient temperature unless otherwise specified.

Parameter	Symbol	Test conditions	MIN	Typ	MAX	UNIT
Collector-base Breakdown Voltage	BV_{CBO}	I_C=50μA,I_B=0	60			V
Collector-emitter Breakdown Voltage	BV_{CEO}	I_C=1mA,I_B=0	50			V
Emitter-base Breakdown Voltage	BV_{EBO}	I_E=50μA,I_C=0	5			V
Collector Cut-off Current	I_{CBO}	V_{CB}=40V,I_E=0			1	μA
Emitter Cut-off Current	I_{EBO}	V_{EB}=4V,I_C=0			1	μA
DC Current Gain	h_{FE}	V_{CE}=3V,I_C=0.5A	60		320	
Collector-emitter Saturation Voltage	$V_{CE(sat)}$	I_C=2A, I_B=0.2A		0.5	1	V
Output Capacitance	C_{ob}	V_{CB}=10V,I_E=0,f=1MHz		40		pF
Transition Frequency	f_T	V_{CE}=10V, I_E=-500mA f=30MHz		90		MHz

CLASSIFICATION OF h_{FE}

Rank	D	E	F
Range	60-120	100-200	160-320

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

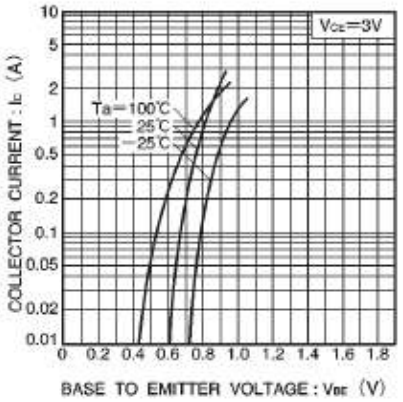

Fig.1 Grounded emitter propagation characteristics

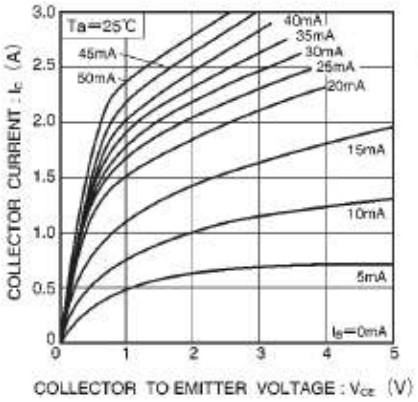

Fig.2 Grounded emitter output characteristics (Ⅰ)

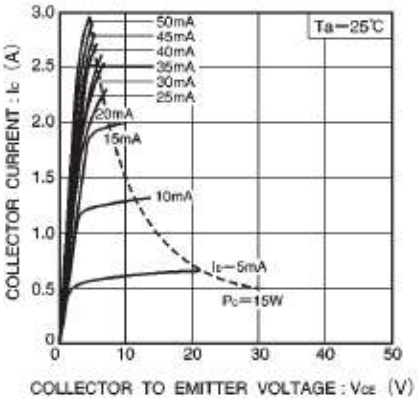

Fig.3 Grounded-emitter output characteristics (Ⅱ)

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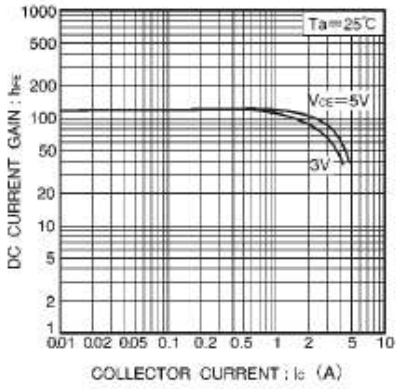

Fig.4 DC current gain vs. collector current (Ⅰ)

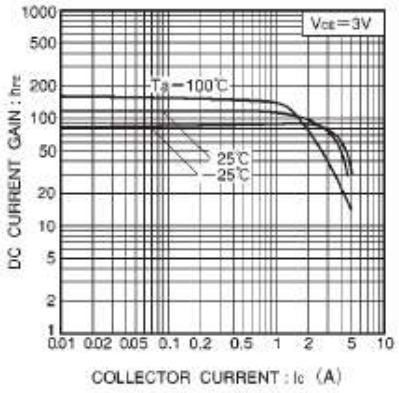

Fig.5 DC current gain vs. collector curren (Ⅱ)

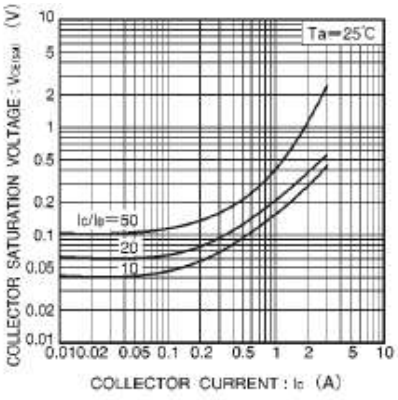

Fig.6 Collector-emitter saturation voltage vs. collector current

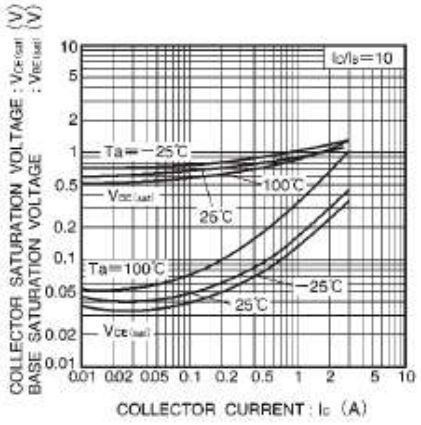

Fig.7 Collector-emitter saturation voltage vs. collector current
Base-emitter saturation voltage vs. collector current

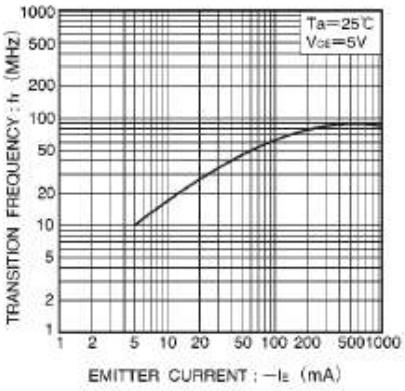

Fig.8 Gain bandwidth product vs. emitter current

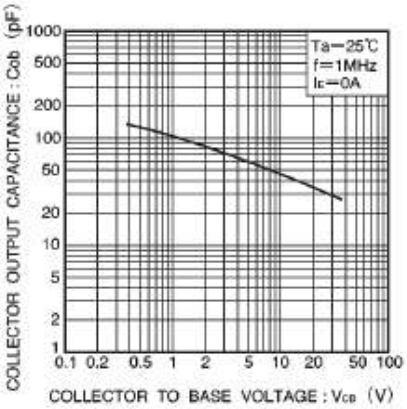

Fig.9 Collector output capacitance vs. collector-base voltage

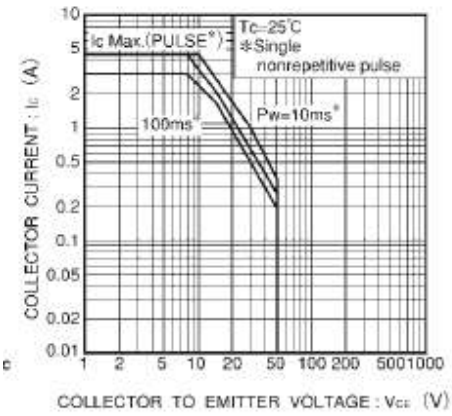

Fig.14 Safe operating area (2SD1762)

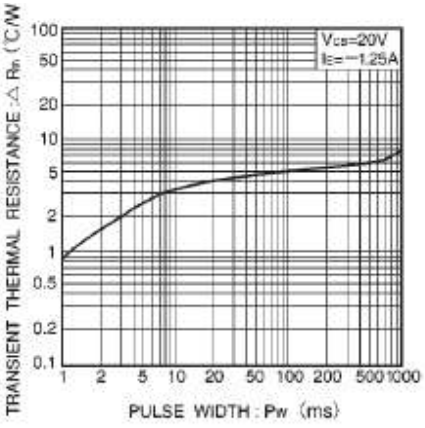

Fig.15 Transient thermal resistance (2SD1762)

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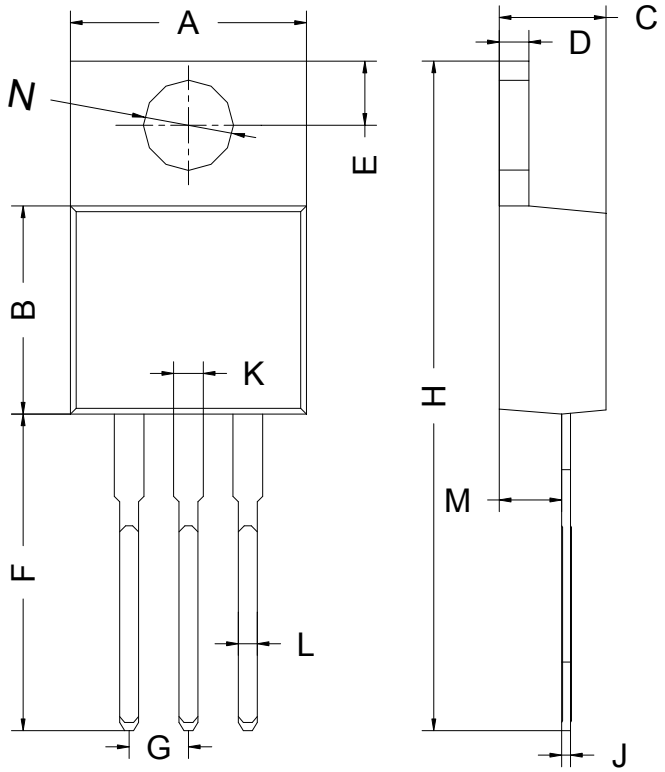
PACKAGE OUTLINE

Plastic surface mounted package TO-220AB



TO-220AB		
Dim	Min	Max
A	9.80	10.30
B	8.70	9.10
C	4.57 Typical	
D	1.27 Typical	
E	2.64	2.84
F	13.14	13.74
G	2.44	2.64
H	28.03	28.83
J	0.38 Typical	
K	1.22	1.32
L	0.71	0.91
M	2.50 Typical	
N	3.86 Typical	
All Dimensions in mm		