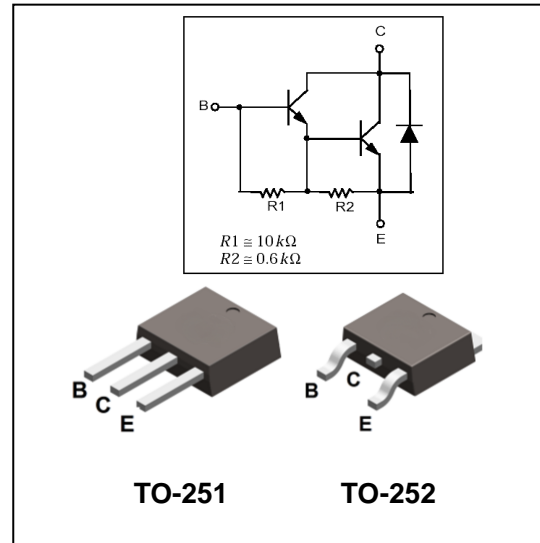




FEATURES

- High DC current gain
- Built-in a damper diode at E-C
- Lead formed for surface mount applications
- Straight lead



Ordering Information

Part Number	Package	Shipping	Marking Code
MJD112	TO-251	80 pcs / Tube	MJD112
	TO-252	80 pcs / Tube or 2500 pcs / Tape & Reel	

MAXIMUM RATING operating temperature range applies unless otherwise specified

Symbol	Parameter	Value	Units
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	2	A
I_{CP}	Collector Power Dissipation	4	A
I_B	Base Current	50	mA
P_C	Collector Power Dissipation	1.5	W
T_J, T_{STG}	Junction and Storage temperature range	-55 to +150	°C

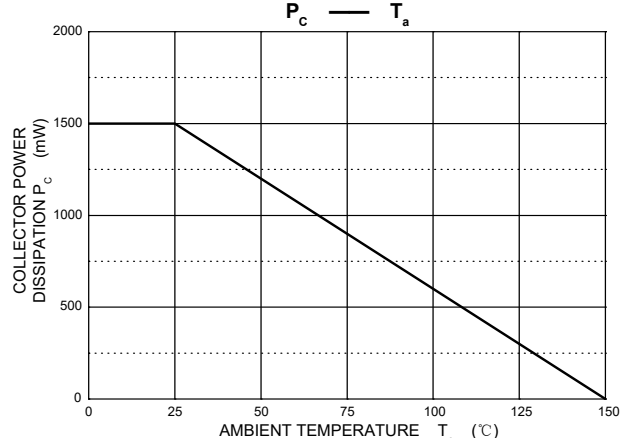
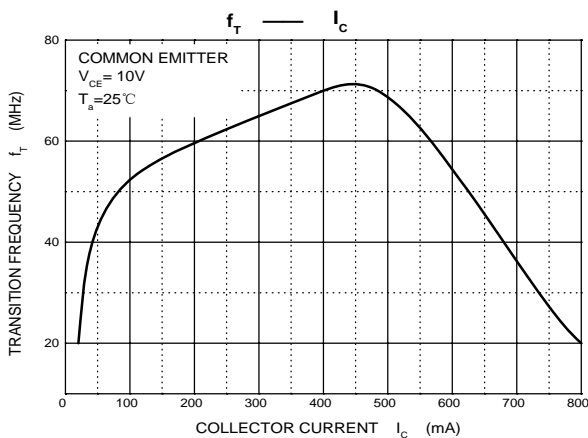
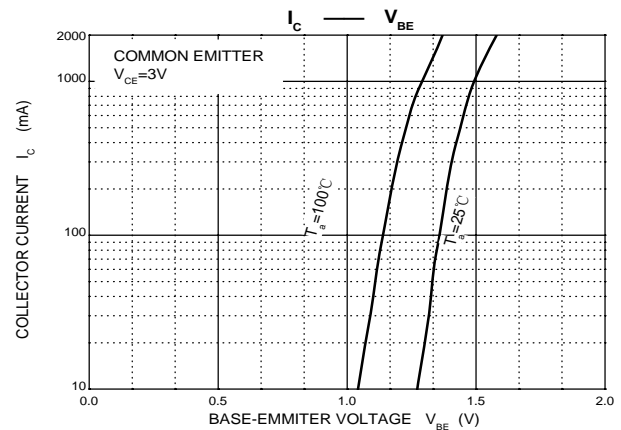
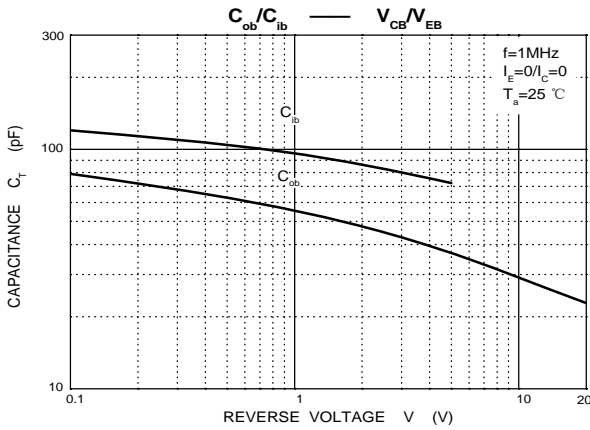
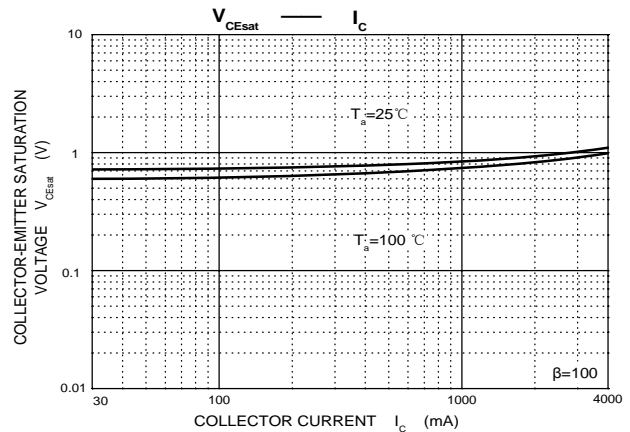
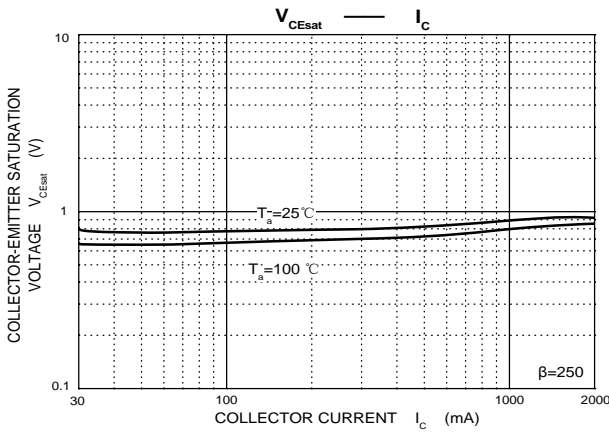
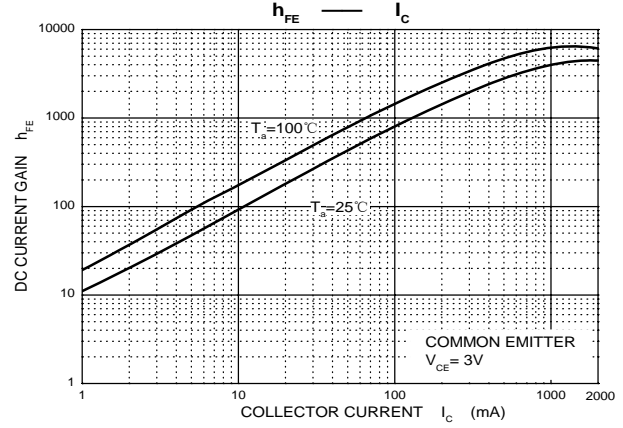
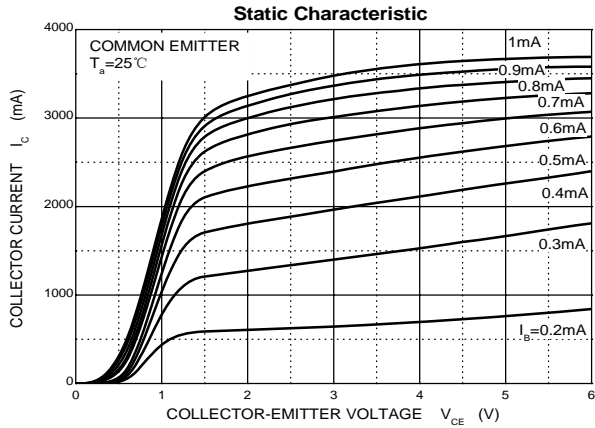


ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-emitter sustaining voltage	$V_{CEO(sus)}$	$I_C=30mA, I_B=0$	100		V
Collector cut-off current	I_{CEO}	$V_{CE}=50V, I_B=0$		20	μA
Collector cut-off current	I_{CBO}	$V_{CB}=100V, I_E=0$		20	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$		2	mA
DC current gain	h_{FE}	$V_{CE}=3V, I_C=0.5A$ $V_{CE}=3V, I_C=2A$ $V_{CE}=3V, I_C=4A$	500 1000 200	12K	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=2A, I_B=8mA$ $I_C=4A, I_B=40mA$		2 3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=4A, I_B=40mA$		4	V
Base-emitter on voltage	$V_{BE(on)}$	$V_{CE}=3V, I_C=2A$		2.8	V
Transition frequency	f_T	$V_{CE}=10V, I_C=0.75A$	25		MHz
Output capacity	C_{ob}	$V_{CB}=10V, I_E=0, f=0.1MHz$		100	pF



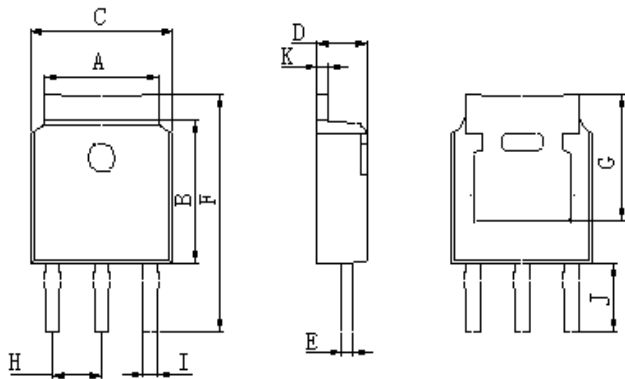
TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified





PACKAGE OUTLINE

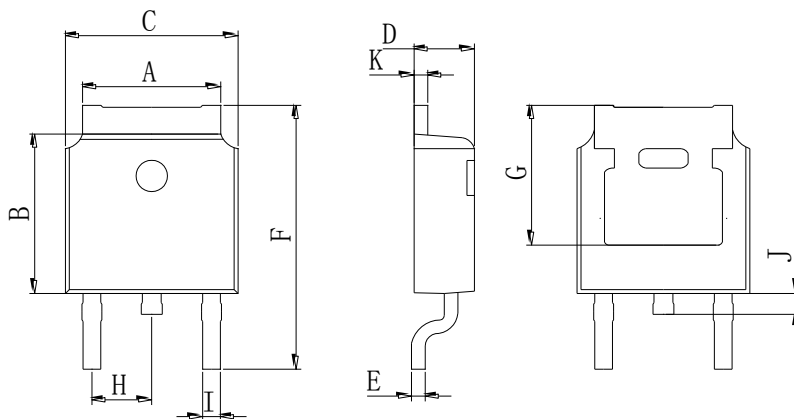
Plastic surface mounted package



TO-251		
A	5.05	5.65
B	5.80	6.40
C	6.25	6.85
D	2.20	2.40
E	0.40	0.60
F	12.00	12.60
G	5.05	5.65
H	2.10	2.50
I	0.70	0.90
J	4.90	5.50
K	0.40	0.60
All Dimensions in mm		

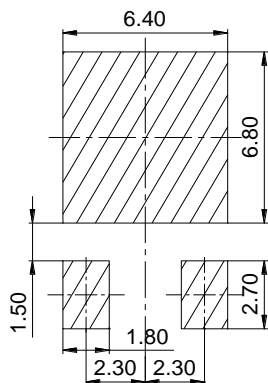
PACKAGE OUTLINE

Plastic surface mounted package



TO-252		
A	5.05	5.65
B	5.80	6.40
C	6.25	6.85
D	2.20	2.40
E	0.40	0.60
F	9.71	10.31
G	5.05	5.65
H	2.10	2.50
I	0.70	0.90
J	0.50	0.70
K	0.40	0.60
All Dimensions in mm		

SOLDERING FOOTPRINT

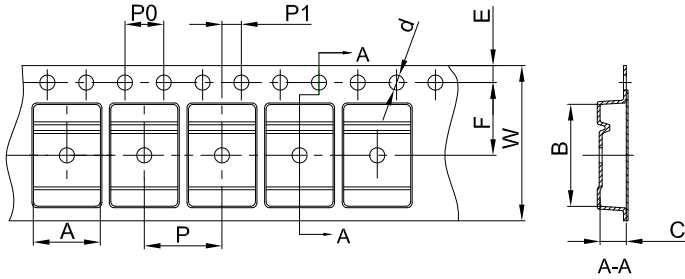


Unit: mm



TO-252-2L Tape and Reel

TO-252 Embossed Carrier Tape

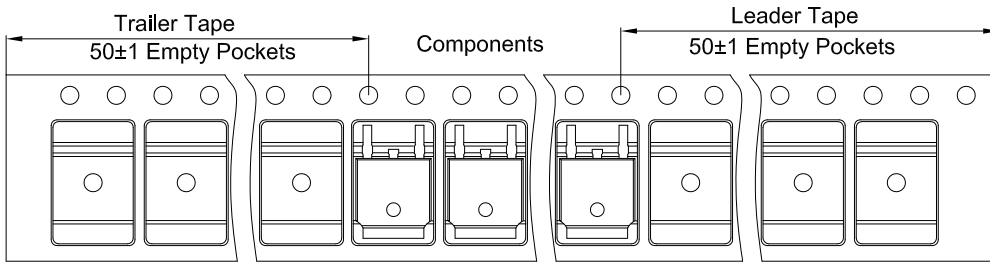


Packaging Description:

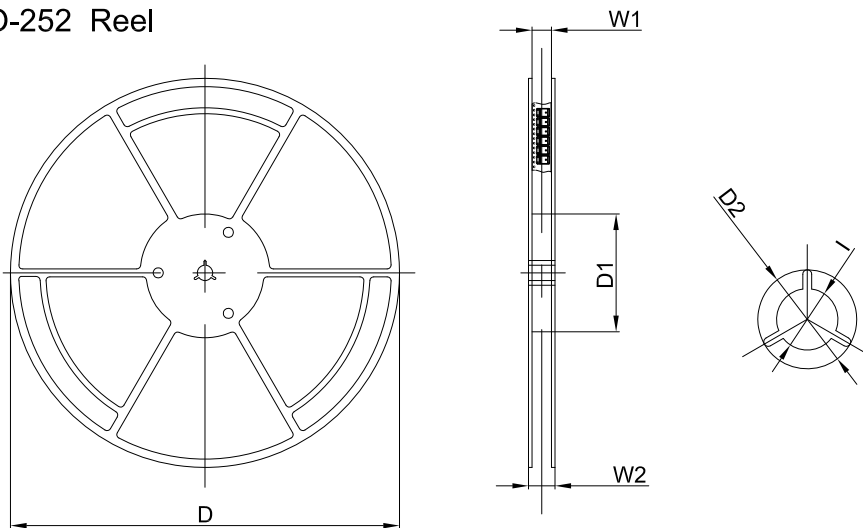
TO-252 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 25,00 units per 13" or 33.0 cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
TO-252	6.90	10.50	2.70	Ø1.55	1.75	7.50	4.00	8.00	2.00	16.00

TO-252 Tape Leader and Trailer



TO-252 Reel



Dimensions are in millimeter						
Reel Option	D	D1	D2	W1	W2	I
13" Dia	330.00	100.00	Ø21.00	16.40	21.00	Ø13.00

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
2,500 pcs	13inch	2,500 pcs	340×336×29	25,000 pcs	353×346×365	

Package	Packing	Quantity	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-251	Bulk	500pcs/Bag	5000pcs	245×170×100	50,000pcs	525×375×270
TO-251	Tube	80pcs/Tube	4000pcs	560×178×35	40,000pcs	585×385×220