

RoHS Compliant Product

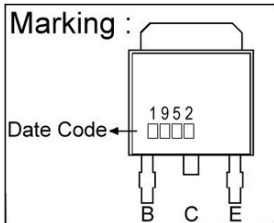
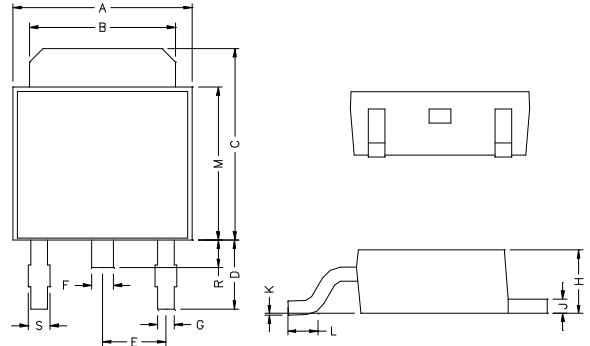
TO-252

Description

The CZD1952 is designed for high speed switching applications.

Features

- * Wide SOA
- * Low Saturation Voltage, Typically $V_{CE(sat)} = -0.2V$ at $I_C/I_B = -3A/-0.15A$
- * High Speed Switching, Typically $t_f = 0.15\mu s$ at $I_C = -3A$
- * Complements to CZD5103



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	6.40	6.80	G	0.50	0.70
B	5.20	5.50	H	2.20	2.40
C	6.80	7.20	J	0.45	0.55
D	2.20	2.80	K	0	0.15
E	2.30 REF.		L	0.90	1.50
F	0.70	0.90	M	5.40	5.80
S	0.60	0.90	R	0.80	1.20

Absolute Maximum Ratings at $T_A = 25^\circ C$ (unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	V_{CBO}	-100	V
Collector to Emitter Voltage	V_{CEO}	-60	V
Emitter to Base Voltage	V_{EBO}	-5	V
Collect Current (DC)	I_C	-5	A
Collect Current (Pulse)	I_C	-10	A
Total Power Dissipation	$P_D(T_A = 25^\circ C)$	1	W
	$P_D(T_C = 25^\circ C)$	10	W
Operating Junction and Storage Temperature Range	T_j, T_{stg}	-55~+150	$^\circ C$

ELECTRICAL CHARACTERISTICS ($T_{amp} = 25^\circ C$ unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-Base Breakdown Voltage	BV_{CBO}	-100	-	-	V	$I_C = -50 \mu A, I_E = 0$
Collector-Emitter Breakdown Voltage	BV_{CEO}	-60	-	-	V	$I_C = -1 mA, I_B = 0$
Emitter-Base Breakdown Voltage	BV_{EBO}	-5	-	-	V	$I_E = -50 \mu A, I_C = 0$
Cut-off Current	I_{CES}	-	-	-10	μA	$V_{CE} = -100V, V_{EB} = 0$
Emitter Cut-off Current	I_{EBO}	-	-	-10	μA	$V_{EB} = -5V, I_C = 0$
Collector-Emitter Saturation Voltage	$*V_{CE(sat)1}$	-	-	-0.3	V	$I_C = -3A, I_B = -0.15A$
	$*V_{CE(sat)2}$	-	-	-0.5	V	$I_C = -4A, I_B = -0.2A$
Base-Emitter Voltage, On	$*V_{BE(on)1}$	-	-	-1.2	V	$I_C = -3A, I_B = -0.15A$
	$*V_{BE(on)2}$	-	-	-1.5	V	$I_C = -4A, I_B = -0.2A$
DC Current Gain	$*h_{FE1}$	120	-	320		$V_{CE} = -2V, I_C = -1A$
DC Current Gain	$*h_{FE2}$	40	-	-		$V_{CE} = -2V, I_C = -3A$
Output Capacitance	C_{ob}	-	130	-	pF	$V_{CB} = -10V, I_E = 0, f = 1MHz$
Transition Frequency	f_T	-	80	-	MHz	$V_{CE} = -10V, I_E = 0.5A, f = 30MHz$
Turn-On Time	t_{on}	-	-	0.3	μs	$I_C = -3A, R_L = 10\Omega$ $I_{B1} = -I_{B2} = -0.15A$ $V_{CC} = -30V$
Storage Time	t_{stg}	-	-	1.5		
Fall Time	t_f	-	-	0.3		

*Measure using pulse current

Characteristics Curve

