

RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

## DESCRIPTION

The CZD2983 is designed for power amplifier and driver stage amplifier applications.

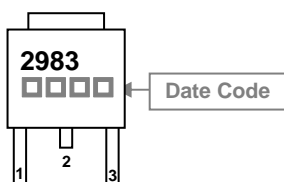
## FEATURES

- High transition frequency :  $f_T = 100\text{MHz}$  (Typ.)
- Complements to CZD1225

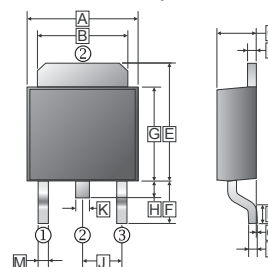
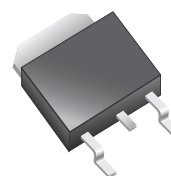
## CLASSIFICATION OF Hfe

Rank	CZD2983-O	CZD2983-Y
Range	70 ~ 140	120 ~ 240

## MARKING



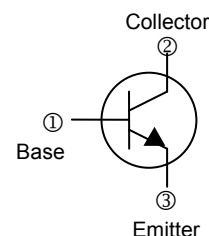
## D-Pack (TO-252)



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	6.35	6.90	J	2.30 REF.	
B	4.95	5.50	K	0.64	1.14
C	2.10	2.50	M	0.50	1.14
D	0.43	0.9	N	1.3	1.8
E	6.0	7.5	O	0	0.13
F	2.80 REF.		P	0.58 REF.	
G	5.40	6.40			
H	0.60	1.20			

## PACKAGE INFORMATION

Package	MPQ	Leader Size
TO-252	2.5K	13 inch



## ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Ratings	Unit	
Collector to Base Voltage	$V_{CBO}$	160	V	
Collector to Emitter Voltage	$V_{CEO}$	160	V	
Emitter to Base Voltage	$V_{EBO}$	5	V	
Collector Current	$I_C$	1.5	A	
Base Current	$I_B$	0.3	A	
Total Device Dissipation	$T_A=25^\circ\text{C}$	$P_D$	1	W
	$T_C=25^\circ\text{C}$	$P_D$	15	W
Junction Temperature	$T_J$	150	$^\circ\text{C}$	
Storage Temperature	$T_{STG}$	-55 ~ 150	$^\circ\text{C}$	

**ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$  unless otherwise noted)**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-base breakdown voltage	$BV_{CBO}$	160	-	-	V	$I_C = 1\text{mA}, I_E = 0$
Collector-emitter breakdown voltage	$BV_{CEO}$	160	-	-	V	$I_C = 10\text{mA}, I_B = 0$
Emitter-base breakdown voltage	$BV_{EBO}$	5	-	-	V	$I_E = 1\text{mA}, I_C = 0$
Collector cut-off current	$I_{CBO}$	-	-	1	$\mu\text{A}$	$V_{CB} = 160\text{V}, I_E = 0$
Emitter cut-off current	$I_{EBO}$	-	-	1	$\mu\text{A}$	$V_{EB} = 5\text{V}, I_C = 0$
Collector-emitter saturation voltage <sup>1</sup>	$V_{CE(sat)}$	-	-	1.5	V	$I_C = 500\text{mA}, I_B = 50\text{mA}$
Base-emitter saturation voltage <sup>1</sup>	$V_{BE(on)}$	-	-	1.0	V	$V_{CE} = 5\text{V}, I_C = 500\text{mA}$
DC current gain <sup>1</sup>	$h_{FE}$	70	-	240		$V_{CE} = 5\text{V}, I_C = 100\text{mA}$
Transition frequency	$f_T$	-	100	-	MHz	$V_{CE} = 10\text{V}, I_C = 100\text{mA}$
Output Capacitance	$C_{OB}$	-	25	-	pF	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$

Note:

1. Measured under pulse condition. Pulse width  $\leq 300\mu\text{s}$ , Duty Cycle  $\leq 2\%$

**CHARACTERISTIC CURVES**

