25 mil Pitch, IEEE 1284 Termination Thin Film Surface Mount Resistor, Capacitor, Diode

Product is pictured larger than actual size to show detail

Vishay has upgraded the standard IEEE 1284 Thin Film technology Network, incorporating diodes for protecting the inputs/outputs from electro-static discharge (ESD).

The sophisticated circuit is housed in a standard QSOP, 28-pin package.

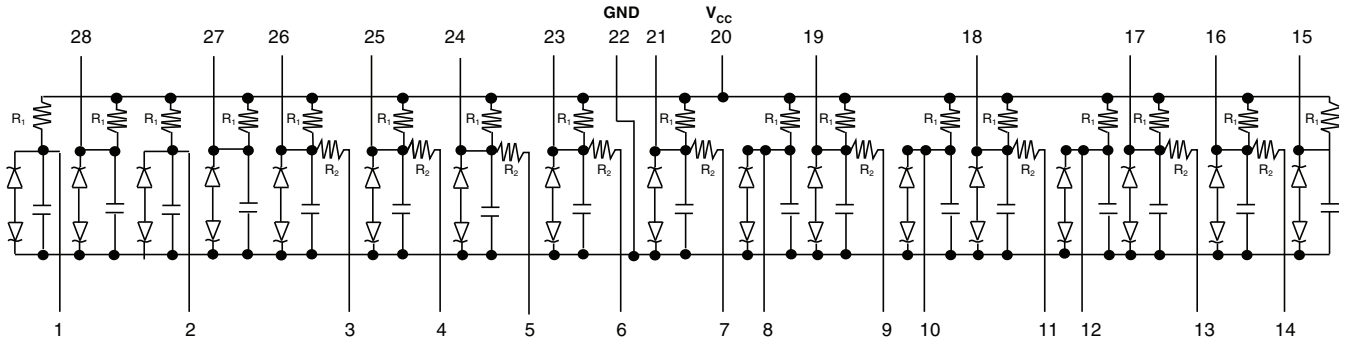
Uses include ECP/EPP parallel port terminations for PC peripherals, notebooks, desktops, workstations and servers. This is a guaranteed stock part.

FEATURES

- One sophisticated, integrated Thin Film technology solution
- Up-graded IEEE 1284 parallel port termination, pull-up with the addition of diodes for filtering on the parallel port
- Standard QSOP package (28 pins) - JEDEC MO-137AF
- 17 terminating lines
- Reduces total cost
- Increase board utilization
- Better performance over discretes
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb-free
RoHS COMPLIANT

SCHEMATIC



STANDARD ELECTRICAL SPECIFICATIONS		
TEST	**SPECIFICATIONS**	**CONDITIONS**
Material	Polysilicon / thin film on silicon	-
Pin/Lead Number	28	-
Resistance Range	-	-
TCR: Absolute	-	-
TCR: Tracking	-	-
Tolerance: Absolute	± 10 % (R), ± 20 % (C)	-
Power Rating: Resistor	100 mW	-
Power Rating: Package	1 W	-
Stability: Ratio	-	-
Operating Temperature Range	0 °C to +70 °C	-
Storage Temperature Range	-65 °C to +150 °C	-
Capacitance Range	-	-
ESD Protection	See table	-
Breakdown Voltage	-	-
Signal clamp voltage	(+) clamp > 6 V; (-) clamp < -6 V	-
Maximum leakage current at V_{CC}	1 µA	Maximum at 25 °C

ESD PROTECTION

	MAXIMUM	MINIMUM
Peak Discharge Voltage at any I/O, Human Body Model, Method 3015 (1)	+8 kV	-4 kV
In System Protection HBM (2)	+15 kV	-8 kV
In System Protection, IEC 1000-4-2, Level 2 (2)(3)	+8 kV	-4 kV
Channel Clamp Voltage at 8 kV ESD Pulses, HBM (1)(2)	+30 V	-30 V

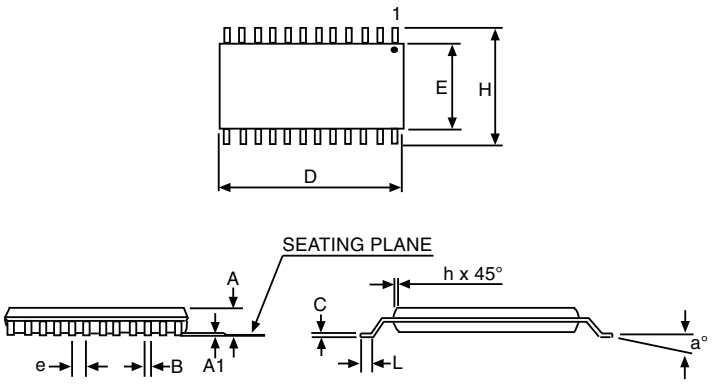
Notes

(1) Human body model per MIL-STD-883, method 3015 $C_{Discharge}$ = 100 pF, $R_{Discharge}$ = 1.5 kΩ pin 20 at 5 V and pin 22 at ground.

(2) Pin 22 grounded, pin 20 to V_{CC} all other pins are open. ESD contact discharge between ground and pins 1, 2, 8, 10, 12, 15, 16, 17, 18, 19, 21, 23 through 28, one at a time.

(3) Standard IEC 1000-4-2 with $C_{Discharge}$ = 150 pF, $R_{Discharge}$ = 330 Ω pin 20 at 5 V and pin 22 at ground.

DIMENSIONS in inches and millimeters



DIMENSION	INCHES	MILLIMETERS
A	0.068	1.727
A1	0.008	0.203
B	0.012	0.305
C	0.010	0.254
D	0.394	10.008
E	0.157	3.988
e	0.025	0.635
H	0.244	6.198
h	0.016	0.406
L	0.038	0.889
a°	8	

Note

- Mold flash not included in body dimensions.
  JEDEC MO-137 package

MECHANICAL SPECIFICATIONS

R/C Element	Polysilicon/thin film
Substrate Material	Silicon
Body	Molded epoxy
Terminals	Copper alloy
Plating	100 % matte Sn
Lead Coplanarity	0.005"
Marking Resistance to Solvents	MIL-STD-202, method 15
Flammability	UL 94 V-0

STANDARD VALUES

AVAILABLE MODELS	R_1 (Ω)	R_2 (Ω)	C (pF)
VSSX1284A	4.7K	33	180
VSSX1284B	2.2K	33	220

GLOBAL PART NUMBER INFORMATION

Global Part Numbering: VSSX1284ATF

V	S	S	X	1	2	8	4	A	T	F

GLOBAL MODEL	PACKAGING
VSSX1284A or **VSSX1284B**	**UF** = TUBED TAPE AND REEL **TF** = Full reels

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