ROHM MICROSYSTEMS

BH9590FP

SCSI ACTIVE TERMINATOR

DESCRIPTION

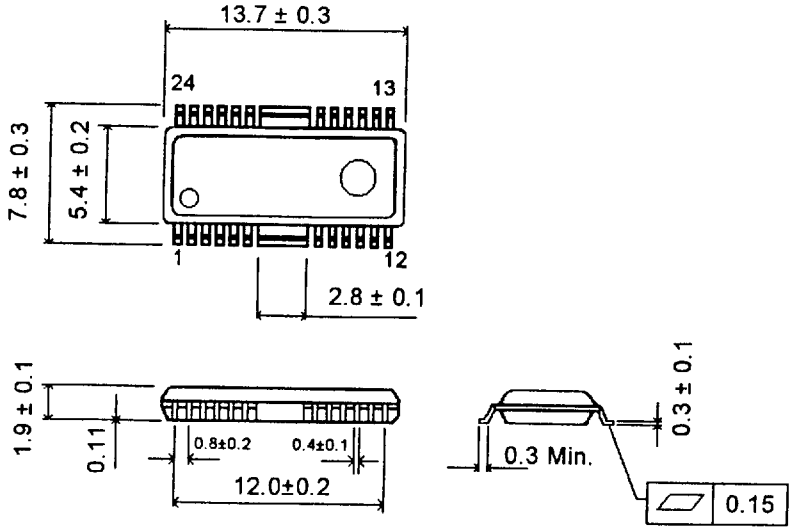
The SCSI Active Terminator is an active power saving replacement for passive resistor terminators. It features 18 bit SCSI line capability with an enable pin that allows all lines to have either termination or high impedance mode (separating the SCSI lines from the termination circuits). The SCSI Active Terminator uses a "push-pull" type 2.85 V generator which maintains a 2.85 V level in all circumstances guaranteeing its ability to adjust to a wide range of signal levels.

FEATURES

1) A 2.85 V generator using a "push-pull" configuration that allows it to accommodate any type of signals.
2) An enable pin which allows either termination to all SCSI pins or high impedance mode to all SCSI pins.
3) Reduced power consumption as compared to passive resistor terminators.
   Power consumption:
   60 mW (off-duty)
   614 mW (25% duty)
   Passive resistor terminators consume 740 mW, 1015 mW for each circumstance.
4) Wide operating voltage range: 4.0 V ≤ V_{DDI} ≤ 5.5V (Transient 6.0 V)
5) Features small package size: (HSOP24) 5.4 (mm) x 13.7 (mm), 1.9 (mm) thickness.
6) Complies to the SCSI 1, and SCSI 2 regulations.

USAGE

- Hard Disk
- CD-ROM
- Light Magnetic Disk
- Tape drive
- Personal Computer
- Notebook Personal Computer
- Lap Top Personal Computer
- Work Station
- Mainframe
- Printer
- Plotter



NOTE: This product may be applicable as a strategic material as determined by foreign exchange and foreign trade control regulation. Please let us know if this product is to be exported.

APPROVED: _____ DATE: _____

ROHM CORPORATION, Rohm Electronics Division, 3034 Owen Dr., Antioch, TN 37013 (615)641-2020, FAX (615)641-2022

ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	LIMITS	UNIT
SUPPLY VOLTAGE	V_{DD1}	- 0.3 ~ +7.0	V
INPUT VOLTAGE	V_i	- 0.3 ~ V_{DD1} + 0.3	V
OPERATING TEMPERATURE	Topr	0 ~ + 70	°C
STORAGE TEMPERATURE	Tstg	- 55 ~ + 125	°C

RECOMMENDED OPERATING CONDITIONS

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT
Supply Voltage	V_{DD1}	4.0	4.5	5.5	V
Input High Voltage	V_{IH}	2.4	-	V_{DD1} + 0.3	V
Input Low Voltage	V_{IL}	- 0.3	-	0.8	V
SCSI Line Voltage	V_{SLX}	- 0.3	-	V_{DD1} + 0.3	V

ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Input Leakage Current	I_{IX}	0 ≤ Vi ≤ 5.5V V_{DD1} = 5.5V	-10	-	10	μA
SCSI Line Leakage Current	I_{SLX}	EN = 0.8 V V_{DD} = 5.5V	-10	-	10	μA
VM Voltage	V_M	4.0 ≤ V_{DD1} ≤ 5.5V	2.736	2.85	2.964	V
Stand by Current	I_{DDSTB}	EN = 0.8 V 4.0 ≤ V_{DD1} ≤ 5.5V	-	-	14	mA
Equivalent SCSI Resistor	R_{SL}	EN = 2.4 V, SCSI Line 4.0 ≤ V_{DD1} ≤ 5.5V	102	110	118	Ω
Load Transient Voltage	Δ VM	SCSI Line GND, V_{DD1}	-	-	100	mV

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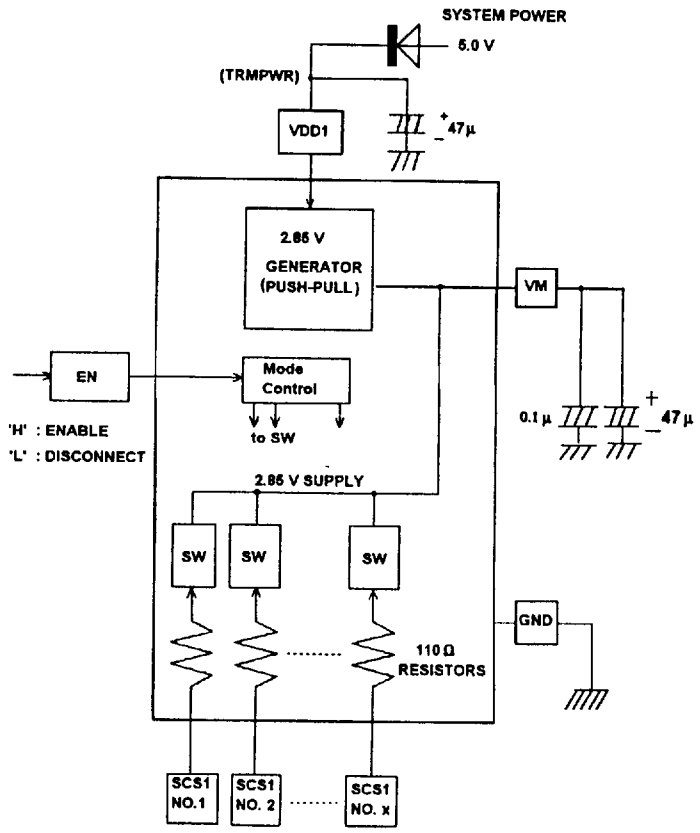
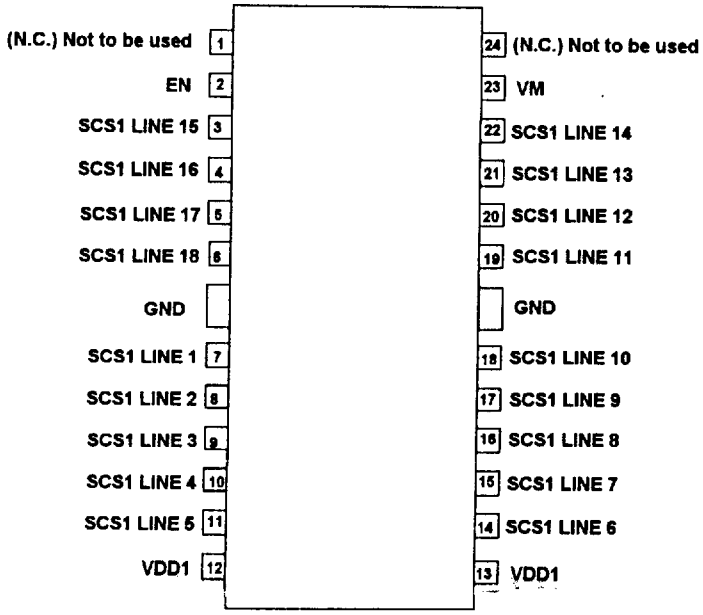
BLOCK DIAGRAM



TOP VIEW



HSOP 24