

SINGLE POLE OptoMOS® RELAYS

LCB110



DESCRIPTION

LCB110 is a 350V, 120mA 35Ω 1-Form-B relay. It provides the most common solution for applications requiring a normally closed OptoMOS relay.

FEATURES

- Small 6 Pin DIP Package
- Low Drive Power Requirements (TTL/CMOS Compatible)
- No Moving Parts
- High Reliability
- Arc-Free With No Snubbing Circuits
- 3750V_{RMS} Input/Output Isolation
- FCC Compatible
- VDE Compatible
- No EMI/RFI Generation
- Machine Insertable, Wave Solderable
- Current Limiting, Surface Mount and Tape & Reel Versions Available

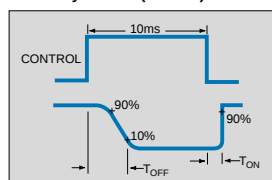
APPROVALS

- UL Recognized: File Number E76270
- CSA Certified: File Number LR 43639-10
- BSI Certified to:
 - BS EN 60950:1992 (BS7002:1992) Certificate #: 7344
 - BS EN 41003:1993 Certificate #: 7344

OPTIONS / SUFFIXES

- S: Surface Mount Package
- TR: Tape & Reel

Switching Characteristics of Normally Closed (Form B) Devices



APPLICATIONS

- Telecommunications
 - Telecom Switching
 - Tip/Ring Circuits
 - Modern Switching (Laptop, Notebook, Pocket Size)
 - Hookswitch
 - Dial Pulsing
 - Ground Start
 - Ringer Injection
- Instrumentation
 - Multiplexers
 - Data Acquisition
 - Electronic Switching
 - I/O Subsystems
 - Meters (Watt-Hour, Water, Gas)
- Medical Equipment-Patient/Equipment Isolation
- Security
- Aerospace
- Industrial Controls

RATINGS (@ 25° C)

Parameter	Min	Typ	Max	Units
Input Power Dissipation	-	-	150 ¹	mW
Input Control Current	-	-	50	mA
Peak (10ms)	-	-	1	A
Reverse Input Voltage	-	-	5	V
Total Power Dissipation	-	-	800 ²	mW
Capacitance				
Input to Output	-	3	-	pF
Isolation Voltage				
Input to Output	3750	-	-	V _{RMS}
Operational Temperature	-40	-	+85	°C
Storage Temperature	-40	-	+125	°C
Soldering Temperature				
DIP Package	-	-	+260	°C
Surface Mount Package (10 Seconds Max.)	-	-	+220	°C

¹ Derate Linearly 1.33 mw/°C

² Derate Linearly 6.67 mw/°C

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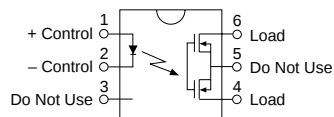
LCB110

SPECIFICATIONS

PARAMETER	CONDITIONS	SYMBOL	MIN	TYP	MAX	UNITS
Output Characteristics @ 25°C						
Load Voltage (Peak)	-	V_L	-	-	350	V
Load Current (Continuous)	-	I_L	-	-	120	mA
AC/DC Configuration	-	I_L	-	-	200	mA
DC Configuration	-	I_L	-	-	200	mA
Peak Load Current	10ms	I_L	-	-	350	mA
On-Resistance	-	R_{ON}	-	23	35	Ω
AC/DC Configuration	$I_L=120\text{mA}$	R_{ON}	-	7	10	Ω
DC Configuration	$I_L=200\text{mA}$	R_{ON}	-	-	-	-
Off-State Leakage Current	$V_L=350\text{V}$	I_{LEAK}	-	-	1	μA
Switching Speeds	-	T_{ON}	-	-	3	ms
Turn-On	$I_F=5\text{mA}, V_L=10\text{V}$	T_{OFF}	-	-	3	ms
Turn-Off	$I_F=5\text{mA}, V_L=10\text{V}$	T_{OFF}	-	-	3	ms
Output Capacitance	50V; f=1MHz	C_{OUT}	-	25	-	pF
Input Characteristics @ 25°C						
Input Control Current	$I_L=120\text{mA}$	I_F	5	-	50	mA
Input Dropout Current	-	I_F	0.4	0.7	-	mA
Input Voltage Drop	$I_F=5\text{mA}$	V_F	0.9	1.2	1.4	V
Reverse Input Voltage	-	V_R	-	-	5	V
Reverse Input Current	$V_R=5\text{V}$	I_R	-	-	10	μA
Input to Output Capacitance	-	$C_{I/O}$	-	3	-	pF
Input to Output Isolation	-	$V_{I/O}$	3750	-	-	V_{RMS}

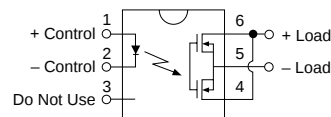
LCB110 Pinout

AC/DC Configuration



LCB110 Pinout

DC Only Configuration

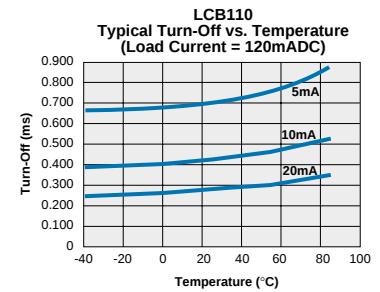
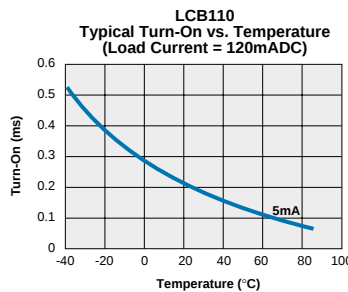
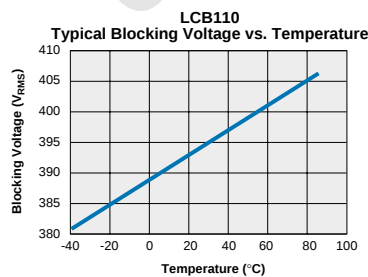
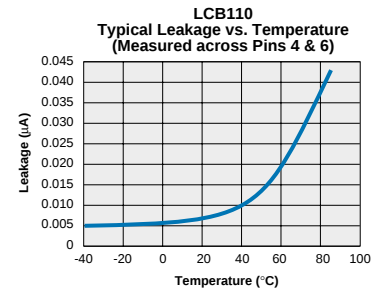
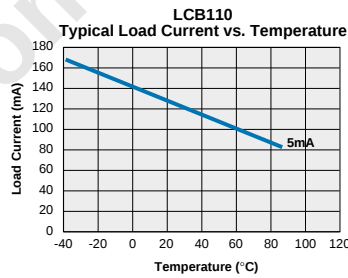
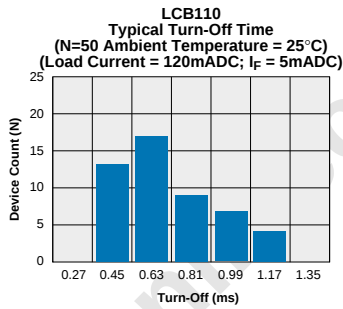
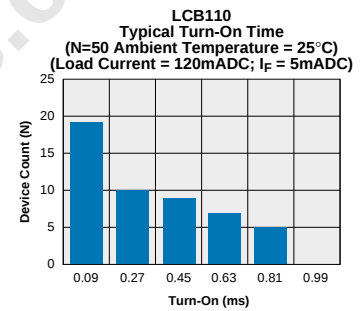
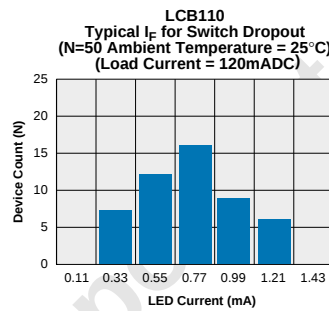
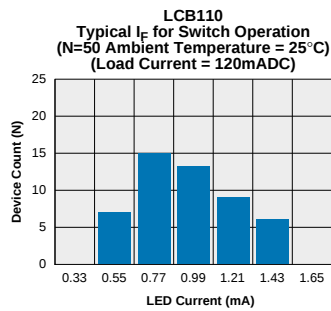
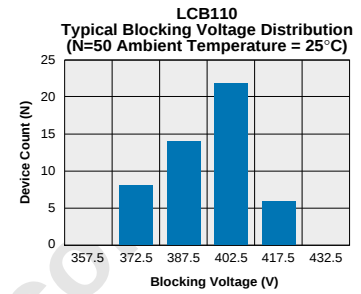
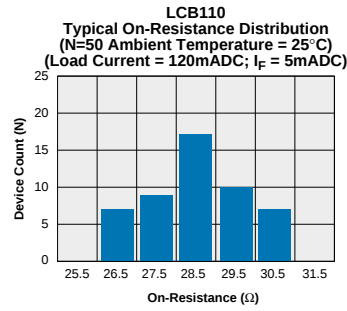
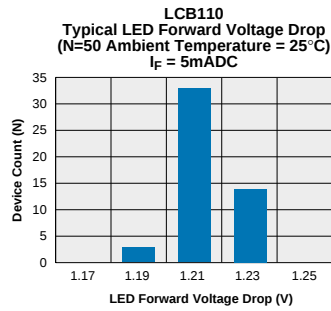


Note: For Mechanical Dimensions See Pages 408-415

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PERFORMANCE DATA



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